Navy Medicine

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Pacific Partnership 2011

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Building Partnerships

Navy Medicine

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Deputy Public Affairs Officer
Shoshona Pilip-Florea

Managing Editor
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Bureau of Medicine and Surgery
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2300 E Street, N.W., Washington, DC 20372-5300
E-mail: BUMED-PAO@med.navy.mil

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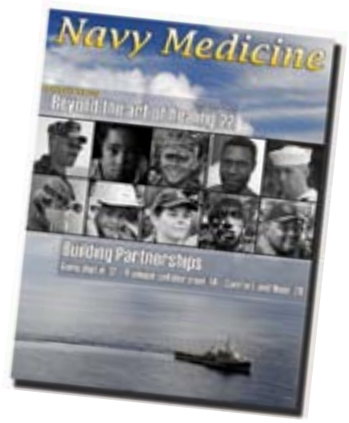

On the Cover

Background Photo: The amphibious transport dock ship USS Cleveland (LPD 7) transits toward the Kingdom of Tonga to begin the first phase of Pacific Partnership 2011. (Photo by Tech. Sgt. Tony Tolley)

Portraits: (*Top row - left to right*) 1. Navy Capt. Jesse Wilson, mission commander of Pacific Partnership 2011, 2. Cpl. Daniel Mayfield, 3. A Tongan girl, 4. Tongan John Leo, 5. Musician First Class John Wheeler. (*Bottom row - left to right*) 6. Lt. Hoan Nghiem, 7. A Tongan girl, 8. Royal Australian Navy Able Seamen dental assistant Kate Macdonald-Walker, 9. A Tongan man, 10. Teddy Taylor, U.S. ambassador to Papua New Guinea.

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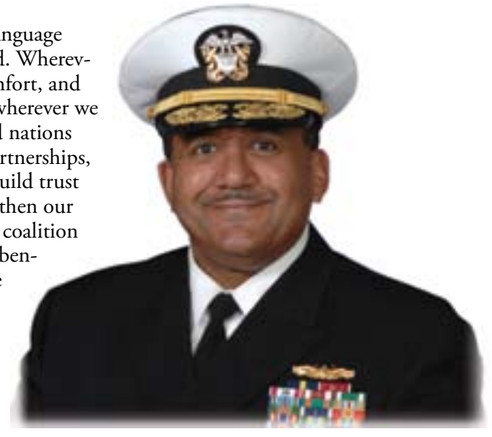
THE UNIQUE ROLE OF Navy Medicine

The 2011 National Military Strategy, which Chairman Mullen released in February, states that the Defense Department's vision is a "Joint Force that provides military capability to defend our Nation and allies, and to advance broader peace, security and prosperity. Our military power is most effective when employed in support and in concert with other elements of power as part of whole-of-nation approaches to foreign policy."

Navy Medicine plays a vital support role in this strategic mission. After responding to two tsunamis in six years, two earthquakes in Pakistan and Haiti, and a hurricane in the Gulf Coast, we have proven the necessity of a robust expeditionary military medical force to bring hope and stability to places and people in dire need, which ultimately leads to more peace, security, and prosperity in the broader world. These missions are perfect examples of "whole-of-nation approaches to foreign policy" through humanitarian assistance/disaster relief.

Japan is but the latest reminder of the importance of our ability to partner with others to provide medical surge capabilities. Our nation's response to the Japanese people after a devastating earthquake, tsunami, and nuclear fallout, shows the selfless character of our nation, and shows our shared values of caring for others in need. Navy Medicine provided force health protection to our own people stationed in Japan and deployed radiological experts and other medical support staff in a surge capacity. Whether in Japan, Haiti, Indonesia, or New Orleans, we help save lives in the short term, and we also provide the conditions for greater security and stability in the long term.

Medicine is a common language that all countries understand. Wherever we can provide hope, comfort, and care to others in need, and wherever we can partner with other allied nations through military medical partnerships, it behooves us to do so; to build trust and cooperation, and strengthen our relationships with a broader coalition of countries for our mutual benefit, and simply put, it is the right thing to do.



These partnerships are translating into a host of new medical advancements in areas like disease prevention, wounded warrior care, and TBI treatment, and especially the care we are providing our warriors directly on the battlefield. Embracing joint, interagency, whole-of-nation, multi-national, and public/private partnerships is where we must go if we are to truly have an enduring impact on global health issues.

Another example of this approach is with our hospital ships, USNS Mercy and USNS Comfort. USNS Comfort is finishing a five-month deployment to South America, Central America and the Caribbean in support of Continuing Promise 2011 and USNS Mercy returned from their five-month Pacific Partnership mission last August after caring for over 210,000 citizens from 13 countries. These are proactive humanitarian civic assistance missions that include combined assets from partnering nations, and a variety of non-governmental and intergovernmental agencies that work with host nations to assist in civil-military operations in response to future crises. These missions are illustrative of how we as a nation are creating whole-of-nation solutions by enlarging our engagement with others around the world. They are also a key component of our maritime strategy (located at www.navy.mil/maritime).

I have visited the crews of these deployments in theater in the past and I can tell you first hand, these humanitarian assistance missions bring to others a sense of enrichment and hope that touches individuals, families, communities, and allied nations, and in doing so, benefits the global community. They not only strengthen relationships with host countries, they provide much needed medical care for thousands of men, women, and children who would otherwise not afford or have access to care that they so desperately need. Continuing Promise is providing dental care including surgical services, public health training, engineering support, veterinary services, as well as sharing best practices with partnering nations. This knowledge sharing is akin to 'teaching a man to fish' in that the information exchange is integral to building host nations' organic medical support, disaster relief preparedness, and maritime security capabilities. The trust and cooperation we help build and sustain with multinational partners greatly enhances our ability to work together should a disaster strike the region in the future.

Our partnerships also extend to countries such as Botswana, Djibouti, Egypt, Vietnam, and Peru where we house research and development labs and work directly with our host nation military medical counterparts. This support applies to our over 500 civilian laboratory employees, 250 of whom are U.S. based, and 330 of whom represent foreign service national employees who support our overseas laboratory network. After earning their advanced degrees, many foreign service national employees assume leadership roles in their homeland universities, and within the health, science and technology directorates within their governments.

Our three overseas laboratory commands and their subordinate detachments and field activities have enabled us to provide needed resources and diplomatic tools for the interagency to develop their own initiatives with foreign governments. Our method of providing "shoulder to shoulder" medical science, infectious disease and health hazard support to host nation governments has been repeatedly cited as their best practice model for building more trust, cooperation, and collaboration with us. To that end, we have held extensive international engagements and development relationships in Africa, South America and Southeast Asia-Pacific for over 66 years.

Our extensive partnerships with military, civilian, and foreign contractor personnel, both at home and abroad, support our overseas operations and provide a much needed infrastructure for enhanced engagement. This work directly supports our national security, diplomatic, and development strategies as well.

Our engagement programs include partnerships in undersea and aerospace medicine, vaccine and infectious disease research, environmental health and toxicology, and surgical and reconstructive research, including regenerative medicine. Our forward presence overseas enables us to provide preparedness regarding potential threats – infectious, toxic and environmental – existent on six continents.

These broad activities above represent only a fraction of what Navy Medicine provides in support of our national security, diplomatic, and development missions. They highlight our enhanced and enlarged global footprint of health diplomacy. These partnerships should serve as a model to grow and sustain our own capacity as well as the capacity of United States interagency programs for the future. We at Navy Medicine have a unique role to play in these missions because we transcend borders through our various partnerships around the world. As global health diplomats and ambassadors, we are part of our nation's global force for good. Thank you for everything you do and thank you for your service. It is my honor and privilege to represent you as your Surgeon General.

--Vice Adm. Adam M. Robinson, Jr.

Vice Adm. Adam M. Robinson Jr. meets with Lt. Gen. Tran Quang Khue, Vice Chairman of Vietnam National Committee for Search and Rescue and Deputy Chief of The General Staff, People's Army of Vietnam, June 15.

Photo by Paul Dillard

Strength through Partnerships

Now, more than ever, the success of the Hospital Corps can be attributed to our flexibility while partnering with other nations, sister services, and humanitarian relief agencies. This year, we have continued to prove our mettle both at home and abroad, leading multiple partnerships and further establishing ourselves as a global force for good.

In Afghanistan, hospital corpsman are distinguishing themselves in multiple joint operations as individual augmentees and while serving in our most enduring and precious partnership with the United States Marine Corps. So strong are our ties to the Marines that many forget about the special partnership that binds our fate, influences our actions, and forms unbreakable ties. As our corpsmen tend the physical and psychological wounds of their Marines, so do the Marines continue to validate our commitment by teaching us those skills necessary for survival in the most austere circumstances.

Missions of joint and civil support, like Operation Continuing Promise, an annual four-month deployment, not only enhance international relationships, but also help train U.S. personnel by virtue of the countries ongoing partnerships. These civil service-military operations send a strong message of the United States' commitment and partnership with the people of Latin America, while giving our health care providers valuable experience that may be otherwise inaccessible to them.

As part of our support of the relief efforts in Japan following the devastation of an earthquake, tsunami, and nuclear disaster, hospital corpsmen from HS 14, USS Ronald Reagan, Essex Amphibious Readiness Group, the entire 7th Fleet and the 31st MEU helped illustrate that operational relationships can quickly morph into humanitarian assistance and disaster relief operations. Operation Tomadachi was a dramatic illustration of the power of global partnerships in re-building positive relationships through "soft" operations, while reinforcing our ability to respond with force to any situation rapidly whether it is hostile or non-hostile. There can be little doubt that alliances between Japan and the United States are considerably stronger today because of our joint medical capability coupled with our eager willingness to team with host countries to deliver care anywhere and at any time.

The hospital corpsman has a profound understanding of the power of partnerships largely because the success of the Hospital Corps is predicated upon successful integration of our resources in any environment. Our men and women must understand the service cultures of all armed combatants while simultaneously recognizing the worth of civil service and humanitarian organizations. Our collective mission then is to nurture existing relationships and to set precedents by creating new partnerships. Our duty is unique in that we must both fight and care; project force and exercise compassion; and, both tow the line and find common ground. I trust we will continue to exercise the same valor, steadfastness, and compassion for many decades to come.

-- Force Master Chief Laura Martinez

Photo by L.A. Shively

Force Master Chief Laura Martinez, Hospital Corps director, speaks following the unveiling of a portrait of Hospital Corpsman 2nd Class Jaime Jaenke during a barracks dedication ceremony at Fort Sam Houston, Texas. The two barracks were named for fallen corpsmen Jaenke and Hospital Corpsman 3rd Class John Fralish.

Supporting Wounded Warriors

By Sarah Fortney
Naval Support Activity Bethesda
Public Affairs

Photo by Mass Communication Specialist 1st Class Jennifer A. Villalovos

Master Chief Petty Officer of the Navy (MCPON) Rick West talks with U.S. Marine Corps Cpl. Charles Leak and his father, Richard from Buford, Ga., at National Naval Medical Center during his visit with Wounded Warriors. Leak suffered injuries while deployed to Afghanistan.

From the moment a wounded warrior and their loved ones arrive at Naval Support Activity Bethesda (NSAB) – throughout their recovery and follow-up care – a number of programs, resources and lodging amenities are available to help ease their stay and transition.

"The goal is to ensure we provide the utmost comfort to the wounded warriors while they're here," said Capt. Constance Evans, director of the Warrior Family Coordination Cell (WFCC).

Ensuring the needs of service members and their families are met, the WFCC oversees all aspects of the wounded warriors stay while at NSAB.

Later this summer, a new wounded warrior barracks, Building 62, will open, offering housing in 153 suites. Each two-bedroom suite includes a kitchenette, washer and dryer, and a lounge area, which allows outpatients a place to stay with a non-medical attendant. If needed, each room is ADA (Americans with Disabilities Act) compliant.

The barracks will also contain an "Austin's Playroom," a drop-in child activity center that will provide certified childcare providers for not only those staying in the barracks, but to personnel in need of temporary childcare while they're at medical appointments.

The Austin's Playroom project is an expansion of the Mario Lemieux Foundation (MLF), established by former professional hockey player Mario Lemieux in 1993. After giving birth to a premature son, Austin, Lemieux and his wife, Nathalie, came up with the idea for the project, which funds hospital playrooms.

NSAB also has plans to begin building an additional lodging facility for wounded warriors and their families later this fall, said Cmdr. Mark Lieb, director of transition for NSAB.

This 200-bed facility, located in a more secluded area on base, will have single and two-bedroom suites.

"The goal is to provide the flexibility to house warriors and their extended families," said Lieb.

Consisting of ADA compliant bathrooms, each floor of the facility will include a laundry room, day room and a communal kitchen.

The facility will be constructed near Building 141, said Lieb. A new garage, providing roughly 460 spaces, will also be built beside Sanctuary Hall.

When those staying in the new barracks are ready to transition to another housing facility on base, back to their parent command, or home, the WFCC will ensure a smooth transition for the individual, serving as the link between military treatment facilities, installations and services, said Evans.

Outpatients who must remain in very close proximity to the hospital for treatment may be eligible to stay at Mercy Hall, which is equipped with ADA compliant rooms and located directly across from the hospital's main building, said Gunnery Sgt. Susan Anderton, platoon sergeant attached to the Marine Corps Liaison Office (MCLO), assigned to Mercy Hall.

With 98 single bedrooms recently renovated in 2008 to improve quality of life, Mercy Hall includes a Fleet and Family Support Office, a communal laundry room, a lounge area, and an intercom system in the event of a medical emergency.

Service members can stay at the lodging facility until they're medically cleared to go back to their unit, until they receive their physical evaluation board findings or transition into inactive reserves, she said.

Additional services that wounded warriors and family members can take advantage of include Fisher Houses and the Navy Lodge.

A non-profit organization established in 1990, the Fisher House program provides military families a place to stay, at no cost, while their loved one is in treatment. Patients who are medically cleared may also stay at the Fisher Houses. The five Fisher Houses located on NSAB, the most on one base within the Department of Defense, will provide 60 handicapped suites, 20 of which are private with common areas, communal dining, family rooms and play rooms for children, said Becky Woods, a Fisher House manager.

Having family close by and being able to stay on base while undergoing treatment, patients at NSAB can feel safe and comfortable, Woods said.

"They're being looked out for," she said.

Throughout treatment at National Naval Medical Center (NNMC), Cpl. David Chirinos, has enjoyed the comforts of both the Fisher House and the Navy Lodge. Since 2009, Chirinos has been in treatment for colon cancer. Before his first break from treatment, he said he was encouraged to check out the Fisher House.

"It's great because it's [move-in] ready, you can move in anytime from anywhere," he said. "I always say 'I have to go home,' and I think of right here. This place is so comforting and there are other families that are going through, maybe not the same thing, but other struggles. You can relate to people and you know everybody here is military as well, or retired, and that's just another level you can relate to people and socialize."

Though Chirinos misses his family in Miami, he knows that they can also stay at the Navy Lodge when they come to visit.

A self-sustaining business established in 1970, the Navy Lodge oper-

Photo by Kathleen Smith

Rear Adm. Paula Brown, deputy commander of First Naval Construction Division, Civil Engineer Corps, visits a model suite in the new wounded warrior barracks at National Naval Medical Center Bethesda. The new construction is part of the Base Closure and Realignment Commission to accommodate patients who will transfer from Walter Reed Army Medical Center to the National Naval Medical Center Bethesda when the hospitals integrate into the Walter Reed National Military Medical Center this September.

"We also take care of our wounded warrior families."

- Mike Rabideau
Navy Lodge manager

ates under the Navy Exchange Service Command. With 106 guest rooms, the lodge is primarily a place to stay for service members, funded by their service, if they have a medical appointment or are Temporary Additional Duty, Permanent Change of Station or Temporary Duty.

"We also take care of our wounded warrior families," said Mike Rabideau, Navy Lodge manager.

He noted that the Navy Lodge underwent renovations last summer and is looking to undergo additional improvements later this year, including lobby upgrades and an additional private meeting room for guests.

"We're putting in two new fitness rooms," he said. "We're trying to accommodate amenities that the guests want."

To accommodate everyone's needs, the Fisher Houses and the Navy Lodge communicate daily, providing each other with room occupancy and availability.

"We keep track [and] we communicate every day what we have available," said Rabideau.

The two lodging facilities make arrangements so loved ones can be together while their family member is in treatment, said Caroline van Santen, Fisher House assistant manager at NNMC. If a large, extended family wishes to stay with their ill or injured loved one, family members can stay at both the Navy Lodge and the Fisher Houses. They also allow families to stay as long as needed and there is no set check-out date or reservation required, she added.

"That's another thing they don't have to worry about," said van Santen. "When families stay here, they can concentrate on their loved ones, and relieving the financial burden is a big [relief]."

As patients and their families go through different types of adjustments, it's important to offer a variety of services, said Marlin Ruhl, director of Fleet and Family Readiness for NSAB. The Fleet and Family Support Center (FFSC) is like the "hub" where service members can walk in, explain what they need, and the center will direct them to the appropriate programs, he said.

The FFSC offers an array of programs for service members and their families, including financial management, relocation assistance, deployed support and emergency preparedness and family wellness, he said.

There are counseling sessions for new parents, liaisons for those transitioning to the area looking to place their children in a local school, and the Exceptional Family Member (EFM) program for those who have family members with special needs.

"[These services] help reduce their level of stress as they are going through a big time of change," said Ruhl.

As an added resources for wounded warriors and their families, construction is underway for a new, two-story, 150,000 square foot Navy Exchange (NEX), more than three times the size of the previous 40,000 square foot store. With a food court with various dining options on the second floor, the new exchange will also include a pharmacy, a satellite Navy Federal Credit Union office, barber and beauty shop, an optical department and a flower shop.

Additionally, there is no shortage of resources for those transitioning out of the military and into the civilian workforce. The FFSC partners with community organizations, such as the USO and the Department of Labor, as well as the NNMC Wounded Warrior Program, to help walk them through every step of the way.

NNMC's Wounded Warrior Program also assists wounded warriors and their families by coordinating lodging and employment, said Billy Hargrove, transition coordinator for NNMC's Wounded Warrior Program.

Hargrove added that the program stresses the value of internships and education, especially amongst those in transition.

"Internships provide you an opportunity to meet and greet, network, get to know people, and possibly get your foot in the door," he said. "Some of our Marines have been offered permanent jobs right after their internships."

The Human Resource Office-Washington Wounded Warrior Employment Program also lends a hand in this capacity.

"We provide outreach and assistance to wounded warriors with resumes, job hunting and, hopefully, permanent federal employment. If they're not in a place where they're ready for that, we try to connect them with internships that are meaningful," said Laura Stanek, human resources advisor and wounded warrior program manager.

The program is unique in that it works to establish partnerships not just within the Navy, but as many other federal agencies as possible, including International Criminal Police Organization and the Federal Bureau of Investigation, she said.

"We understand that to be of the best service to our wounded, ill and injured men and women, we've been doing outreach with other federal agencies to make sure that we have a partnership established across agency lines," she said. "We're also working within our own organization to make sure our managers are aware of this talent pool and they know how to hire them. These individuals bring with them the knowledge of what the mission is of the organization, they know about protecting American lives and they bring dedication. They're disciplined, they want to contribute [and] they want to stay within the organization if they can."

For more information about FFSC services, call 301-319-4087. For information about transition assistance, contact Billy Hargrove at 301-319-2486, Laura Stanek at 301-319-4589 or Wendy Blankenship at wendy.blankenship@navy.mil.

COUNTDOWN to excellence

By Katie Bradley
National Naval Medical Center Public Affairs

Photo by Communication Specialist 2nd Class John K. Hamilton

Master Chief Hospital Corpsman David Hall, senior enlisted leader for the Deputy Commander for Clinical Support at the National Naval Medical Center (NNMC), speaks to a group of administrative personnel from NNMC and Walter Reed Army Medical Center during an integrated customer service training at NNMC in May.

With roughly 70 days to complete the integration with Walter Reed Army Medical Center (WRAMC), officials say the transition process is moving along smoothly and, though there's been much progress, staff can still expect to see additional changes leading up to September.

"We're certainly on the last lap of the race," said David Oliveria, Base Realignment and Closure (BRAC) Program Manager and Deputy Chief for Facilities for Navy Medicine National Capital Area.

"During this time, we're making sure we've paid attention to crossing the "T's" and dotting the "I's" so that when you cross the finish line, there's a quality product of which we all can be proud," said Oliveria.

Throughout the BRAC journey, transition leaders from WRAMC and the National Naval Medical Center have been working to ensure staff and clinics are fully prepared for integration. At this point, most clinical areas are ready, though some administrative areas are awaiting completion.

"Some parts of integration simply can't happen until you are all together," said Capt. David Bitonti, Chief of Staff for Integration and Transition. "We will cross that milestone in the coming months [which] will provide the segway for putting the finishing touches on our integration process and effort. We have made, are making, and continue to make good progress with the integration of our staff and clinics."

Bitonti added that chiefs have been appointed for each department and clinic to oversee their respective areas, allowing a cohesive workforce, better serving wounded, ill and injured service members, their families, and all eligible beneficiaries.

The process of integrating departments began with the development of a program for design, providing the foundation of the Concept of Operations (CONOPS) for each department or service. These CONOPS outlined how integration leaders envisioned their particular department or service functioning in the new facility as a single entity, Bitonti said.

"They are taking the best processes and practices from each facility and merging them," he said.

To accommodate the influx of patients, visitors and staff expected after integration, the hospital has undergone major transformation. Doubling the size of the current facility, about one million sq. ft. has been added, most of which is in medical treatment areas, said Oliveria. Although 200,000 sq. ft. is still under renovation, Oliveria said,

"We're well positioned to handle the additional patient load as a medical center."

"We're not only building a hospital [within] a hospital, while we continue to operate the hospital, but we're doing it in a wartime environment," said Oliveria.

Transition leaders agree this has been one of the key challenges of integration.

To ensure a successful execution of this transition, the staff's cooperation has played a vital role.

"Our staff has been nothing short of superb," Bitonti said. "Their level of professionalism, dedication, and caring is unparalleled. They have done this while working around new construction, renovation, road closures and rerouting, temporary and permanent moves, swing space, and everything else associated with a project of this magnitude. Through it all, they have maintained an excellent attitude and 'can do' spirit, and their commitment and dedication to wounded warrior care has skyrocketed during some of the highest patient census periods."

As transition draws near, the pace will be ramping up.

"Over the next few weeks, people can expect to see increased activity in preparation for moves, completion of construction and renovation and continued department or service orientation and training," Bitonti said.

"We've probably taken on [one of] the largest construction projects in military medicine and we've done it in an incredibly condensed timeline. Trying to blend two cultures is very significant, and trying to put them under one roof to operate to provide health care is significant. We will be unique in that when we get done we will be the hub for wounded warrior care, for traumatic brain injury and for amputee care. This will be the place to come," Oliveria said. "It's amazing the amount of talent that's being brought together in this one facility to provide healthcare for our beneficiaries."

A UNIQUE collaboration

Story and photos by Kathy MacKnight
Naval Health Clinic New England Public Affairs

"Even though most of the VA patients are retired Army and Marine members, they love seeing a uniform and it usually prompts stories of their Vietnam or WWII days."

- Lt. John De Boer
Nurse Corps
Naval Health Clinic New England, Newport, R.I.

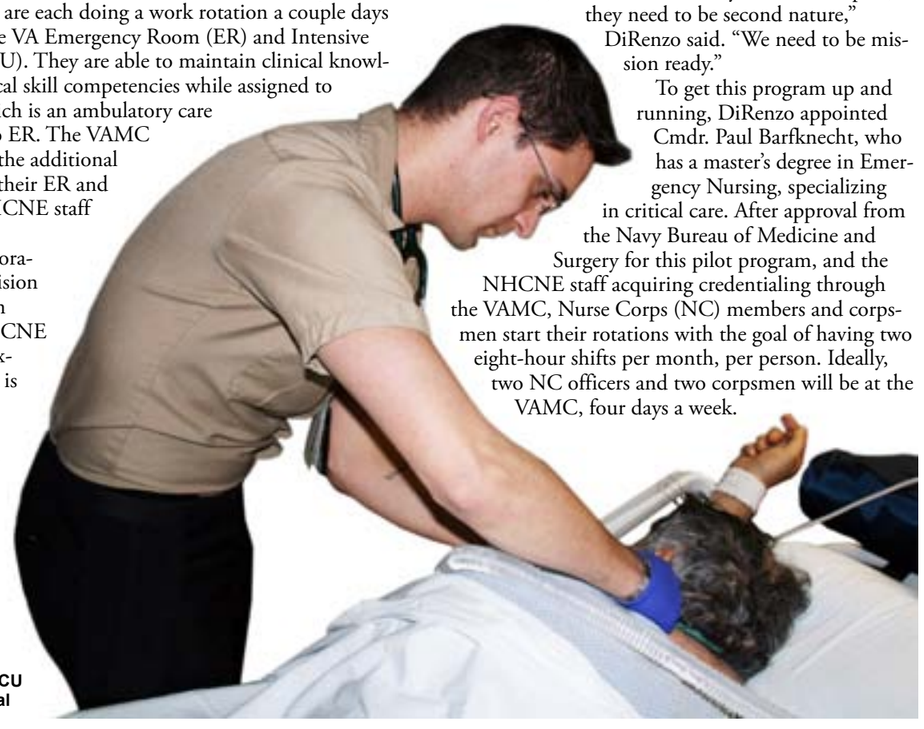
A unique collaboration is underway between Naval Health Clinic New England (NHCNE) Newport, R.I., the Naval Branch Health Clinic, Groton, Conn., and the Veterans Affairs Medical Center (VAMC) in Providence, R.I.

This arrangement is beneficial to the both the Navy and VAMC staff and the VA patients. NHCNE Military nurses and corpsmen are each doing a work rotation a couple days a month in the VA Emergency Room (ER) and Intensive Care Unit (ICU). They are able to maintain clinical knowledge and critical skill competencies while assigned to NHCNE, which is an ambulatory care center with no ER. The VAMC benefits from the additional manpower in their ER and ICU with NHCNE staff onboard.

This collaboration was the vision of Capt. Karen DiRenzo, NHCNE senior nurse executive, and it is the first of its kind arrangement between Navy Medical and the VA. Nursing staff and corpsmen need to maintain and sustain "urgency skills" or competency in triage, assessment, and in procedures that they will encounter during deployment, and the VAMC ER and ICU experience fulfills that training.

"It is not enough to know these procedures and to have done them, no matter how many times in the past, they need to be second nature," DiRenzo said. "We need to be mission ready."

To get this program up and running, DiRenzo appointed Cmdr. Paul Barfknecht, who has a master's degree in Emergency Nursing, specializing in critical care. After approval from the Navy Bureau of Medicine and Surgery for this pilot program, and the NHCNE staff acquiring credentialing through the VAMC, Nurse Corps (NC) members and corpsmen start their rotations with the goal of having two eight-hour shifts per month, per person. Ideally, two NC officers and two corpsmen will be at the VAMC, four days a week.



Hospitalman Corey Bynum from Naval Branch Health Clinic (NBHC) Groton, Conn., adjusts a patient's breathing apparatus in the ICU at the Providence VA Medical Center.

"... I have learned why certain things are done in some procedures and how to do them."

- Hospitalman Corey Bynum
Naval Branch Health Clinic, Groton, Conn.

Lt. Greg Heimall, Nurse Corps, from Naval Health Clinic New England Newport, R.I., and Lt. Cmdr. Tamera Tuttle, Nurse Corps, Naval Branch Health Clinic, Groton, Conn., in the VA Intensive Care Unit, attend to a critically ill patient.

Lt. Karen Downer, who deployed in January of this year, had the opportunity to work and train at the VAMC approximately a dozen times before she deployed. She praised the great team environment of working together with their staff and was thankful for the VAMC experience as it increased her confidence and better prepared her to perform in her role while deployed.

Lt. John De Boer, NC, compared the VAMC and NHCNE patient populations.

"At the VA we are dealing with horizontal patients instead of vertical patients," he said.

NHCNE patients walk in the door and at the VA they usually arrive by ambulance, a testament to the critical care required, he said.

DeBoer has also experienced the connection the VA patients feel with clinicians in military uniform and they comment on the Navy khaki worn by the NHCNE staff.

"Even though most of the VA patients are retired Army and Marine members, they love seeing a uniform and it usually prompts stories of their Vietnam or WWII days," DeBoer said.

The Providence VA Medical Center is a full-service facility. They treat 180,000 patients a year, have a staff of over 1,000 and are affiliated with Brown Medical School, the University of Rhode Island School of Pharmacy, and Rhode Island College School of Nursing. This is the ideal setting for NHCNE staff to hone their critical care skills and the VAMC staff is exceptionally receptive to all participating Navy personnel and supportive of this program.

"The VA experience promotes the idea of our nurses training and teaching our corpsmen acute care skills," said Capt. Colleen McLarnon, who is getting ready to relieve Cmdr. Barfknecht due to his retirement.

Lt. Cmdr. Tamera Tuttle, NC, has had the opportunity to do just that.

"The VA provides the opportunity for us as Navy nurses to work hand-in-hand with our corpsmen, preparing them, many of whom are just out of corps school," Tuttle said. "We can explain what is important and what we can do better for the best outcome for the patient,"

Lt. Greg Heimall, interim program coordinator, added that the clinical hours spent in the ICU and ER help the Navy Nurses to meet the requirements of NAVMED Policy 06-013 Standard Organizational Policy for Nurse Assignment, Staffing, and Operational Clinical Skills Sustainment.

The Corpsmen who are participating in the program have been enthusiastic about this opportunity as well. Hospitalman Rebecca Brown has seen improvement in her I.V. skills, and has been able to refine her patient assessment protocol.

"Patients who come into the ICU or ER can be confused and disorientated," she said. "And communicating with this patient is very different than taking a history from a relatively healthy patient seen in a clinic setting."

Hospitalman Corey Bynum has observed how important it is for staff to work to together.

"It must be fluid," he said. "And I have learned why certain things are done in some procedures and how to do them."

When asked what areas of critical care he feels he has had the opportunity to improve upon the most during the last couple months, he indicated his new appreciation for the importance of laboratory testing and obtaining specimens, refining his bedside manner, and how critical it is to pass on patient information and documentation to the next shift of care givers for a seamless continuum of care for the patient.

The NHCNE staff is keeping their critical care skills at peak performance and the VAMC has the added benefit of more nursing staff in their busy ER and ICU.

"When my staff comes in the morning, one of the first things they ask me is, 'will the Navy be working here today?'" said Ms. Denise Bezila, RN, and Nurse Manager of the VAMC Emergency Room. "They really look forward to having the Navy onboard."

GOING DIGITAL

Virtual Lifetime Electronic Record unveiled to Veterans Advisory Council

Story and photos by Deborah Kallgren
Navy Medicine East Public Affairs

Cmdr. Donald Shenenberger, a dermatologist at Naval Medical Center Portsmouth, Va., shows VLER participant Richard Bone, an Army retiree and Vietnam veteran, his medical record.

The Virtual Lifetime Electronic Record (VLER) was unveiled to the Veterans Advisory Council at the Hampton VA Medical Center on April 20.

The initiative allows medical providers from Department of Defense, the VA and Bon Secours Virginia Health System to see their patients' records from all three systems. Patients must use all three systems to participate.

The medical facilities have been working together to accomplish a seemingly easy task: eliminating medical records on paper and allowing all of a patient's medical providers access to the complete medical record. In 2009, President Barack Obama directed the DoD and the VA to create VLER, "a system that will ultimately contain administrative and medical information from the day an individual enters military service throughout their military career, and after they leave the military."

While DoD and the VA have been working together for some time, adding civilian medical systems to the process has not been easy. As medical facilities eliminate paper records, they use different computer programs. Often, patients receive medical care from several different medical groups that use different software to record their patients' records. For providers to see computer records from a different facility, a software "translator" to exchange data is needed that also protects patient privacy and security.

Naval Medical Center Portsmouth and the medical facilities at Joint Base Langley-Eustis are the participating DoD facilities. In 2010, Portsmouth is the second naval medical center to use VLER, building on the lessons learned at the first facilities to implement VLER, Naval Medical Center San Diego and Kaiser Permanente.

The Bon Secours facilities are seven hospitals in Virginia, including DePaul Medical Center in Norfolk, Maryview Medical Center in Portsmouth and Mary Immaculate Hospital in Newport News. The Hampton VAMC is the third partner.

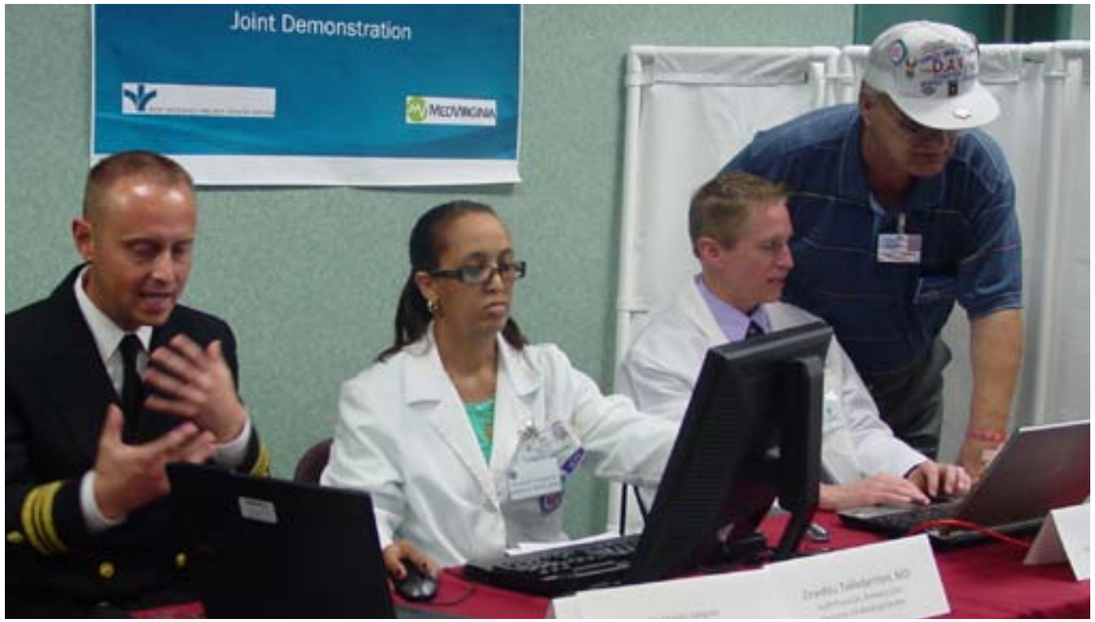
The VA asked patients who use all three systems if they would like to give VLER a try.

Charles Gargulis of Newport News, Va., was one who stepped forward. An Army veteran who served during the Vietnam War, he is being treated for 32 ailments including a rare bone marrow disease. He fits the criterion because his treatment spans VLER's participating facilities. Since opting into VLER, his doctors can log on to the computer and see what treatments and prescriptions he receives from other facilities. Gargulis said one of the best parts of VLER is not having to track down paper records and carry them from doctor to doctor.

"I don't have to search for anything," said Gargulis. "Before, just a little over a year ago, for me to get records, I had to go through hell. I don't have to carry nothing to the doctor – I tell 'em to hit the (computer) button and it's over."

Gargulis also takes multiple prescription drugs, and VLER is designed to ensure doctors can view what others are prescribing to avert drug interactions.

"I think that it's going to really help cut down on costs and also help us keep from sending patients to get duplicate services done and just putting them through more work than they need to be," said Dr. Phillip Snider of Bon Secours.



Doctors from the VLER partners show their patient Charles Gargulis, right, how they are able to access his medical record.

Tim Cromwell, a VA employee, described how his father-in-law, a Korean War veteran, has to schlep a cardboard box full of medical records among his appointments at the VA and other civilian providers. He called the process outdated and the solution challenging.

But the VLER partners are overcoming the odds, creating a comprehensive medical record template that providers and patients will want to use.

"It's standardizing the information so it can be shared," said Department of Defense VLER Manager Mark Hiner. "We are building on technology so that the default decision is for providers to participate."

VLER continues to add data elements, so that providers can see more and more of the care a patient is receiving across the three participating medical entities. Currently, content is available to see the names of the healthcare providers, allergy and drug sensitivity, condition, medications, immunizations, vital signs, lab and test results, a list of encounters and procedures, and personal and other information. Every six months, the VLER partners add additional data elements to make the electronic record more complete.

With the health data exchange capability, when a veteran visits a private health care clinician, prior medical history data is available instantly to help guide the best possible treatment in any locations that participates in VLER. Before, patients frequently consented to sharing their medical information, but it could take weeks or months to receive paper documents. Now the information can be transmitted electronically, within minutes. VLER ensures 24/7 access to critical health information.

"Being able to access the information from those different facilities, I think, is an amazing accomplishment and something from a medical standpoint, it's been very necessary," said Lt. Cmdr. Craig Carroll, a neurologist at NMCP.

When a provider accesses the patient's VLER record, they can input their medical findings, but have read-only access to information provided from the partner facilities. Tracking programs monitor the security by tracking who has accessed the patient's record.

Dr. Katherine Gianola of the Richmond VA said, "It's long overdue and patients have been asking for this for ages." She said other southeastern Virginia health systems have expressed an interest in VLER.

As the Virginia VLER initiative matures, the lessons learned benefit medical treatment facilities that join the program.

It's expanding throughout the nation to VA facilities in Richmond, Va., Spokane, Wash., Indianapolis, and Asheville, N.C., in conjunction with DoD and civilian community partners.

Gargulis said more patients like him should participate.

"Any veteran that doesn't sign up for this, well, it's the only way to fly," he said. "Now these (doctors) all have access. And they're the ones I want to have access, because they're the ones keeping me alive."

HOSPEX: A FIRST HAND LOOK

Upon learning the entire U.S. medical contingent would be attending additional training in the U.K. prior to arriving at Camp Bastion, Afghanistan, feelings were mixed between excitement and wonder.

Questions included "how was this additional training going to add to what the group had already been exposed to and how would it serve to better prepare our team to work effectively with our British counterparts?" These questions and those that weren't verbalized would be answered beyond the imagination. The group of 46 doctors, nurses, corpsmen and administrators would soon find out just how beneficial HOSPEX training would be.

The 46 U.S. medical personnel had just completed a fairly rigorous 20-day training period at Fort Jackson, S.C. In the height of summer, most states located below the Mason-Dixon Line can be torturous with temperatures topping out at 95 degrees on most days with an average humidity of 80 percent or more. The heat was both daunting and draining to the body. The thought of any kind of additional training after the Fort Jackson experience was a lot to consider and weighed heavily on everyone's mind, but all were committed to embracing the training and our fellow U.K. medical personnel with positive energy and attitudes.

The charter flight that took us to Royal Air Force Mildenhall left Fort Jackson on the Sept. 27 and arrived in the early morning hours on Sept. 28. We were greeted by the U.S. Liaison team that was already working in Bastion at the Role 3 hospital and had come to England to facilitate our transition for training. After a much needed breakfast meal, we began the four-hour bus drive north to Queen Elizabeth Barracks (QEB) in Strensall.

Upon our arrival at QEB, we sorted our gear, were assigned barracks and secured our weapons in the armory then set off for a much needed rest. The following two weeks would prove to be both the most beneficial life-like medical training most of us had experienced in our careers and we would not know the true benefit of this training until the second week of October, after we arrived in Bastion.

Training at HOSPEX began with a series of lectures that addressed U.K. medical regulations, governance policies, pharmaceuticals and a myriad of other clinical and administrative topics to ensure the U.S. contingent was aware of as many of the nuances as possible between the U.K. and U.S. medical systems.

George Bernard Shaw once said, "England and America are two countries separated by a common language" and this was truer than any of us realized. We spent several days just learning how to speak each country's respective English. As odd as this may sound, it really was a necessary step that was so important to have addressed and complete prior to attempting to function as an integrated trauma team in Afghanistan. The U.K. and the U.S. use different pharmaceuticals, different dosing methods, different types of equipment that although accomplish the same end, function entirely differently than the equipment within the U.S. medical arsenal.

In conjunction with the lectures, we had the opportunity to view the HOSPEX training facility prior to the actual exercise.

Although many U.S. medical personnel had trained within the Fleet Medical Hospital systems of the U.S. Navy, they had never seen a to-scale mock-up of where they would be working in Afghanistan to include the entrances, exits, paperwork, supplies, equipment and communication flow, which made the training very realistic. This was truly a top-notch facility that was built with great pride in the ability to provide an environment as close to the real thing as they possibly could.

As lectures and introductions continued, off-duty time with our U.K. counterparts further served to promote unity and cohesion among us that would prove to be invaluable in the days to come. Discussions with U.K. personnel, some of which had been to Bastion previously, were not only helpful but served to calm those of us that had never served in Afghanistan or in an area filled with the dangers and trauma that was inherent to Bastion. Bonds began to form and a sense of belonging for the U.S. contingent followed.

When HOSPEX began, there was already a sound relationship base that had built over the previous week during the orientation phase. When the announcement to begin the exercise occurred, all personnel were ready.

Mock casualties began flowing in and the U.S. contingent readily gelled with our U.K. counterparts, eager to work together, eager to learn and eager to take advantage of the opportunity to get into a flow that would result in a well-oiled team.

As the training staff conducted their end-of-day assessments, the results were astonishing. By any account, it appeared by day three that the two teams had worked together before.

Positive relationships continued to build and areas that needed improvement or issues that were identified as potential barriers to care were addressed in an environment where there was ample time to analyze, recommend and correct appropriately. Patient flow, result reporting, necessary personnel within trauma areas, relevance of directives, etc. were all explored and perfected during the HOSPEX evolution. New systems were explored and all personnel needing training were given as much time as they wanted and/or needed to perfect their skills on the new instrumentation.

One of the biggest benefits of HOSPEX is the ability to be trained in an environment that is familiar. Many studies have shown that personnel who are trained in a familiar environment learn better than those who are in an unfamiliar environment.

HOSPEX provides a real, clinical environment that alleviates the wonder and allows personnel to concentrate completely on honing their skills and solidifying the team. The to-scale operation offers the ability to pinpoint personnel developmental needs with satisfaction of those needs then interwoven into current processes and workflow. When a new issue or difficult process is identified, the training provides immediate development of the staff skills needed to master the procedure.

The instructional staff was excellent and this environment provides them the opportunity for immediate correction of errors, immediate review and identification of additional necessary training. At a higher level, the command element has direct oversight of the training and development methods used which lends to immediate input and content. When training and development result in better outcomes, personnel tend to display a greater sense of ownership and pride.

The training at HOSPEX served a vital role in the development of the team that arrived in Bastion the second week of October in 2010.

The Role 3 hospital saw one of its busiest months in October and the team that had trained together in Strensall saved many lives together in Afghanistan.

Lt. Cmdr. Cheryl C Ringer, served as director for administration of the Role 3 Hospital at Camp Bastion, Afghanistan.

Camp Bastion Field Hospital and Medical Treatment Facility in Helmand province, Afghanistan.
British Royal Air Force photo by Cpl. Patricia M. Morrison

By Navy Bureau of Medicine and Surgery Public Affairs

Humanitarian Assistance and Disaster Relief

Fostering partnerships by providing aid and China's growing response

On the day after Christmas 2004 a 9.0 magnitude earthquake in the Indian Ocean caused a series of deadly Tsunamis that battered the coast of Asia, especially Indonesia. The devastating wave swept through the continent claiming buildings, homes and more than 100,000 lives.

The U.S. Navy responded to the catastrophe by sending one of its two Mercy-class hospital ships, the USNS Mercy, to perform vital humanitarian assistance operations. It was the first time since the ships entered the fleet in the mid-1980s that one had been sent on a humanitarian assistance/disaster relief (HA/DR) mission. More recently, the USNS Comfort participated in a mission to Haiti following the devastation caused by an earthquake in 2010.

In *A Cooperative Strategy for 21st Century Seapower*, the United States lists HA/DR as one of the core components of U.S. maritime power and an activity that helps to prevent war and build partnerships.

"Since 2005, the United States has performed annual partnership-building, HA/DR missions to over 30 countries in Asia and the Americas called Pacific Partnership and Continuing Promise respectively, said Leah Averitt, research fellow within the China Maritime Studies Institute at the Naval War College."

The USNS Comfort is currently performing Continuing Promise 2011, once again illustrating the Navy's devotion to engaging other nations in activities that deter conflict and foster stronger relationships.

"Hospital ship HA/DR missions are one of the premier methods of engaging with countries in which the U.S. has a clear strategic interest," said Capt. Albert Shimkus (ret.) associate professor of National Security Affairs at the Naval War College. "Building partnerships with these nations is in fact one of our national goals."

The U.S. has been the dominant force protecting the world's oceans.

"The safety and economic security of the U.S. depends upon the secure use of the world's oceans," according to *The National Strategy for Maritime Security* published in 2005.

"The protection of important sea lines of communication to support the successful transport of goods around the globe is one of the U.S. Navy's primary responsibilities," said Averitt. "Protecting the global means of economic transport preserves our way of life and ensures our continued prosperity. It is in our national interest to maintain the system that has fostered our economy, built our strong military, and protects our national security."

But the U.S. cannot and should not do this alone.

"The U.S. alliance system has been a cornerstone of peace and security for more than a generation and remains the key to our success, contributing significantly to achieving all U.S. objectives," according to the *2008 National Defense Strategy*. "Often our partners are better positioned to handle a given problem because they understand the local geography, social structures, and culture better than we do or ever could. Strengthening our burgeoning system of alliances and partnerships is essential to implementing our strategy … Our partners provide resources, knowledge, skill, and capabilities we cannot duplicate."

"Partnership-building is a long and dedicated endeavor requiring substantial allotments of effort and time," said Shimkus. "A primary goal of building these partnerships is to build trust."

"We cannot simply surge trust and relationships on demand," according to the most recent *Quadrennial Defense Review*. "Trust must be built over time and is a necessary requirement for all international partnership and alliance relationships. Annual hospital ship missions are an excellent way to build this trust and assure the continued success of strategically important relationships."

Another key goal of HA/DR missions is building host nation capacity to continue medical care once the Navy has left.

"This requires training and educating the host nation as well as orchestrating a healthy public affairs campaign to ensure transparency of the mission," said Shimkus. "Building the capacity of the host nations to care for themselves will allow us to rely more heavily on them in the future."

Dedicated hospital ship HA/DR missions are an indicator that the U.S. is a responsible member of the international community and a global leader.

"It is a symbol of status and prestige. Hospital ships with their white paint and red crosses not only serve as a symbol of goodwill but also as an image of national power," said Averitt.

In 2005, former Deputy Secretary of State Robert

> The United States lists Humanitarian Assistance and Disaster Relief (HA/DR) as one of the core components of U.S. maritime power and an activity that helps to prevent war and build partnerships.

Photo by Lance Cpl. Vernon T. Meekins

U.S. Marine Corps Lance Cpl. Alvin Lee a chemical, biological, radiological and nuclear specialist with Survey Platoon, Marine Wing Headquarters Squadron, 1st Marine Aircraft Wing, scans the gear of Soldiers returning from Ishinomaki, Japan, for radiation contamination levels during Operation Tomodachi at Naval Air Facility Atsugi in Kanagawa prefecture, Japan, April 28, 2011. Operation Tomodachi was the name chosen by the Japanese government for the joint humanitarian assistance operation that took place in response to the magnitude 9.0 Tohoku earthquake and subsequent tsunami that struck northeastern Japan March 11, 2011.

Zoellick coined the term "responsible stakeholder" to describe the process by which states work to "sustain the international system that has enabled [their] success."

The *National Defense Strategy* "encourages China to participate as a responsible stakeholder by taking on a greater share of the burden for the stability, resilience, and growth of the international system."

China has already begun to do this. From September to November 2010, China embarked on its first hospital ship HA/DR mission to Djibouti, Kenya, Tanzania, the Seychelles, and Bangladesh. It was called Harmonious Mission 2010.

The large Chinese dedicated hospital ship that performed the mission, the Peace-Ark, was under construction as early as 2004.

"It is commonly thought that the construction of the Peace-Ark was a result of their inability to send a hospital ship to Indonesia following the Indian Ocean Tsunami," Shimkus said. "However, given that it was already under construction at the time of the disaster, the Chinese hospital ship was built for the same purpose that our hospital ships were originally designed -- to treat casualties during combat. This position is affirmed by Chinese authors who assert that the Peace-Ark was built to be used in a possible Taiwan Strait scenario or to be used in a potential clash over island claims in the South China Sea."

During Harmonious Mission 2010, the Chinese treated over 15,000 people and performed over 90 surgeries.

"One of their most frequent procedures was cataract removal," Averitt said. "The Peace-Ark's medical capabilities are said to be equal to the top-level hospitals in Beijing."

In addition to the Peace-Ark being commissioned in 2008, China currently has ten other hospital ships including a large, containerized hospital ship named the Village-River that appeared in 2007 and utilizes TEUs converted into operating rooms and medical facilities; a self-defense mobilization ship with medical modules much the same as the Village-River called the Shichang that was developed in the mid-1990s; two medium-sized hospital ships, the Nankang class, converted from attack transport ships in the early 1980s, five small hospital ships appearing in 2009, and a small catamaran hospital ship appearing just recently, according to Averitt.

"The rapid development of the Chinese hospital ship program over the past five years illustrates an increased emphasis on developing assets that can be used to assist in wartime but also have highly valuable uses in peacetime," said Averitt. "The Village-River is said to be a more economical hospital ship because it can be converted from a container ship in 24 hours and does not require the high, year-round maintenance costs of the Peace-Ark."

Photo by Petty Officer 1st Class Matthew Bradley

U.S. Navy Chief Hospital Corpsman Scott Heintschel, left, delivers supplies to residents of a tsunami-affected town on Japan's eastern coast March 21, 2011. Marine Helicopter Antisubmarine Squadron (HS) 14 was conducting humanitarian assistance and search and rescue operations in support of Operation Tomodachi earthquake and tsunami relief efforts.

Tommy Thompson, former U.S. Secretary of Health and Human Services from 2001-2005, introduced a concept called "medical diplomacy."

"Medical diplomacy is providing medical care to those in need as a means for a country to improve its image on the international scene and spread its soft power influence," said Shimkus.

Joseph Nye defines soft power as "the ability to achieve what you want through persuasion or attraction."

"Hospital ships are key soft power assets," said Shimkus. "Relating back to China's interest in Africa, two Chinese authors write that 'China's soft power in Africa is another source of economic strength and is a strategy for economic cooperation.' Soft power provides the means to assert one's influence overseas. Hospital ships are indispensible to achieve this goal."

Hospital ships offer the potential for China and the U.S. to cooperate in HA/DR missions.

"In 2009, four Chinese doctors visited the USNS Comfort while it was performing HA/DR operations in Colombia," said Averitt. "Current hospital ship missions provide another opportunity to grow U.S.-China military-to-military relations. Cooperation during planned peacetime missions will foster the necessary experience for the U.S. and China to work together when another natural disaster occurs and both nations respond."

During Harmonious Mission 2010, the Chinese treated over 15,000 people and performed over 90 surgeries.

Photo by Cpl. Patricia D. Lockhart

U.S. Marines, Soldiers and a Navy hospital corpsman clear tsunami debris from Minato Elementary School in Ishinomaki City, Japan, March 31, 2011, during Operation Tomodachi.

Photo by Kristopher Radder

U.S. Navy Hospital Corpsman 2nd Class Cheryce Tinaynan, right, examines a Papua New Guinean child at a medical civic action project in support of Pacific Partnership 2011 in Wampar, Papua New Guinea, May 24, 2011.

Beyond the art of Healing

By Mass Communication Specialist 1st Class R. David Valdez
Pacific Partnership Public Affairs

It's an understood fact that medical professionals, whether they are medics, corpsmen, nurses or doctors, require extensive training to help people recover from illness and injury. Just about any patient would rather have a competent, well-trained professional with a good bedside manner than the alternative. But what kind of training prepares a doctor to staff a team consisting of hundreds of people from different services, countries and disciplines? How does the task of putting together a medical contingent for a mission like Pacific Partnership get accomplished?

"Interoperability brings completely different skill sets to the table. Some nations are organizers and some are doers, but generally the mixed skill sets are a real advantage."

- Cmdr. Bruce Greig
Royal Australian Navy

Photo by Mass Communication Specialist 2nd Class Michael Russell

The Pacific Partnership 2011 medical team load an Australian man into a French Puma helicopter in Espiritu Santo, Vanuatu.

Pacific Partnership is an annual humanitarian assistance and disaster relief (HA/DR) practical training mission, sponsored by Pacific Fleet, to Southeast Asia and the South Pacific, to help increase interoperability between partner nations and host nations. There are some similarities and differences between a standard strike group deployment and a Pacific Partnership deployment on an odd-numbered year.

On even-numbered years, Pacific Partnership is conducted from hospital ship USNS Mercy (T-AH 19), but odd-numbered years have seen the mission conducted from amphibious assault ship USS Peleliu (LHD 5), dry cargo ship USNS Richard E. Byrd (T-AKE 4), and now amphibious transport dock ship USS Cleveland (LPD 7).

Like a standard deployment, there is a need for at least one ship and a crew, an immediate superior in charge, a collection of medical professionals, engineers, administrative staff, and not all of these people come from the same command or even nation.

Unlike a standard amphibious ready group deployment, the focus of the mission is not on transporting Marines to their mission, but it is instead focused on getting the life sciences professionals, engineers and subject matter experts to patients, work sites and students. Some

Photo by Kristopher Radder

Local boys take part in a welcoming ceremony for participants of Pacific Partnership 2011. Pacific Partnership is a five-month humanitarian assistance initiative that will make port visits to Tonga, Vanuatu, Papua New Guinea, Timor-Leste and the Federated States of Micronesia.

Left -- Amphibious transport dock ship USS Cleveland (LPD 7) pulls out of Tonga after completing the first mission of Pacific Partnership 2011. (U.S. Navy photo by Mass Communication Specialist Seaman John Grandin)

"Everybody is comparing notes and exchanging business cards. For the medical team, Pacific Partnership is true to its name because these people are making life-long friendships here."

- U.S. Navy Cmdr. Steven Gabele, officer in charge of the Pacific Partnership medical contingent and Fleet Surgical Team 9

A Ni-Vanuatu boy plays with blue pillars outside of Vanuatu Maritime College during Damage Control exercises for the Vanuatu phase of Pacific Partnership 2011.

Photo by Airman 1st Class Haleigh Greer

of these patients aren't even human.

"The construction of the medical contingent is based upon what missions were conducted in the past," said Cmdr. Steven Gabele, officer in charge of the Pacific Partnership medical contingent and Fleet Surgical Team 9. "We sent out a request for forces through Pacific Fleet and Navy Medicine West, which drew resources from doctors, nurses, corpsmen, dentists, and preventive medical technicians throughout the Pacific Fleet. Military veterinarians are unique to the Army, so we had to ask for assistance from them."

This is a process which requires an ability to remain flexible, as the nature of what amounts to coalition operations depends on the various needs each partner nation has to fulfill outside of Pacific Partnership.

Those external needs came into play earlier this year following the Queensland floods in Australia and the Christchurch earthquake in New Zealand. One of the ships in the Pacific Partnership 2011 group, landing ship HMNZS Canterbury (L 421), responded and delivered aid to the people of Christchurch, but that generated some concerns with Pacific Partnership leaders regarding whether or not the New Zealand contingent would be able to participate. Fortunately, the New Zealand Defence Force (NZDF) was able to bring their ship, and more importantly, their medical professionals on the mission.

As one of the primary partner nations, the inclusion of the New Zealand contingent was an important factor in the success of the mission.

Because the missions during odd-numbered years don't have the facilities available to conduct as many surgeries -- if any -- aboard ship, the mission usually focuses on primary care, dental care and preventive medicine. These are critical capabilities, but the NZDF provided a surgical team for the 2011 deployment with the expressed intent of performing surgery in the local hospital in Port Vila, Vanuatu.

This added capability proved invaluable when an Australian tourist sustained a life-threatening injury to his femoral artery just after midnight May 3. In other words, partner nation and host nation medical professionals responded to a real-life crisis situation during a training mission. New Zealand surgeons stabilized the patient in a Vanuatu hospital, while an Australian doctor coordinated movement and allocated resources. A French New Caledonian helicopter launched from Canterbury with an American doctor to keep the patient stable in transit. He survived thanks to a multinational team of medical professionals.

Medical professionals all have the same ambition, either help those who aren't well or help them avoid getting ill. This is accomplished with a wide variety of methods, equipment and practices. Pacific Partnership is able to employ

Photo by Mass Communication Specialist Seaman John Grandin

Naval Air Crewman 2nd Class Bowen Derik attached to Helicopter Sea Combat squadron 23 Wild Cards watches the amphibious transport dock ship USS Cleveland (LPD 7) as it pulls out of Tonga after completing the first mission of Pacific Partnership 2011.

Photo By Kristopher Radder

U.S. Army Capt. Kellie Stewart gives a puppy deworming medication while Australian Army Capt. John Lee holds him at a remote veterinarian civic action program site for Pacific Partnership 2011.

Photo by Mass Communication Specialist Seaman John Grandin

LAE, Papua New Guinea (May 29, 2011) Aviation Boatswain's Mate Airman Ronnie Brownfield plays soccer at Kilage Stadium in Lae, Papua New Guinea, during a community relations soccer exhibition in support of Pacific Partnership 2011.

a very large pool of highly specialized medical professionals by assembling a joint-service, multi-national medical and dental team, enabling the establishment of a "best-practices" concept for HA/DR situations.

"Interoperability brings completely different skill sets to the table," said Cmdr. Bruce Greig, a doctor with the Royal Australian Navy. "Some nations are organizers and some are doers, but generally the mixed skill sets are a real advantage."

Since the medical team includes dental care, preventive medicine and veterinary care, the work isn't just a diversity of nations, but a diversity of occupations as well.

"Providing dental care with other nations allows us to improve our own skills by learning from each other while still helping improve the oral health of the host nations," said Capt. Tiffany Kisway, a dentist with the Canadian Army, who helped with hundreds of dental patients in Tonga alone.

By drawing from multiple pools of talent, the mission commander of Pacific Partnership, U.S. Capt. Jesse A. Wilson, commander, Destroyer Squadron 23, is able to provide a skilled and capable team without affecting the parent command's ability to engage in on-going operations or fill the needs of contingency operations which Australia, New Zealand and the United States routinely meet, regardless of location or type of operation.

"Interoperability is a very key component of this mission because we cannot predict when or where the next HA/DR situation will happen," said Wilson. "By looking to partner nations to provide subject matter expert exchanges (SMEEs) in formal and informal settings, we now create professional ambassadors for our own communities."

"The flow of information isn't just limited to a partner nation to host nation direction. The host nations have a level of situational expertise that can prove useful to the Pacific Partnership team, and the flow of information also extends between the partner nations to their own local professional communities, enhancing the quality of interoperability beyond the individuals who are actually on this mission. This application is proving itself successful in Pacific Partnership, and could very well apply to other operations," he said.

One example of the way this pooling system works is in the case of U.S. Lt. Cmdr. Rivka Weiss, a pediatric nurse practitioner who was sent on Pacific Partnership 2011 from her parent command in Japan.

"When the request for forces came from Pacific Fleet, they asked for pediatricians, but my command [Naval Hospital Okinawa] determined they couldn't afford to send their pediatricians," Weiss said. "There is a scarcity of doctors, and my command preferred sending an advanced practice nurse instead of a doctor. As a nurse practitioner, I can't provide surgical treatment or critical care, but I'm well-suited for this mission because I specialize in primary and acute care for children. It was very gratifying to me that my command had so much confidence in me to give me the opportunity to go on Pacific Partnership. Here in the South Pacific, most of the people who run hospitals and clinics are nurses, so when we do our subject matter expert exchanges, it gives nurses an opportunity to communicate with nurses. It's very empowering for me and the nursing community."

During the course of the humanitarian assistance initiative, U.S. Navy doctors will work with Australian Army nurses, NZDF medics, and consult with U.S. Army doctors or anyone else who's qualified to work in this environment.

"There's a real need for professional diversity," Weiss said. "You don't have isolated levels of experience in any of the medical professions. By embracing the whole team concept, you can understand that everybody brings something to the table."

Weiss explained that cultural diversity helps to establish interoperability with host and partner nations because having similar cultural backgrounds makes certain behaviors seem a little more familiar.

"If you happen to be from certain cultural backgrounds, then the notion of family might be a little more inclusive than it would be from others," she said. "Here, there are families that extend far beyond what Americans might think of as the traditional nuclear family."

In this context, ethnic and gender diversity contribute to improved interoperability, especially considering the history of the region where Pacific Partnership does its work. By seeing the modern face of Australia, New Zealand and the United States, host nations can see that success can be based on merit rather than ethnic or gender suitability. This can create a greater feeling of ease for host nation citizens who may have lived under some sort of colonial rule.

Photo By Kristopher Radder

LUGANVILLE, Vanuatu (May 2, 2011) -- Capt. Tiffany Kisway a dentist from the Canadian Army helps extract a tooth at Northern District Hospital during Pacific Partnership 2011.

Employing a diverse group of people from so many backgrounds, not necessarily military, is key to engaging host nations, building relationships with them, bringing personal experiences to their people and taking new experiences back home.

"New York's diverse health issues and populations can be reflected here on a much smaller scale," said Dr. Joanne Bennett, a public health nurse and senior research scientist with the NYC Department of Health and Mental Hygiene. "While at home, one always needs to prioritize to efficiently use resources. Here, where there are so few resources available, priorities can be much clearer."

Interoperability with a diverse team isn't just something that stays on the mission either. The appreciation for that interoperability and diversity will spread beyond the context of the mission.

"Everybody is comparing notes and exchanging business cards. For the medical team, Pacific Partnership is true to its name because these people are making life-long friendships here," Gabele said.

Over the course of 11 days in Tonga, the multinational and multi-service Pacific Partnership team engaged local leaders, treated 3,806 patients, 819 of which were children, cared for 163 animals, completed seven engineering projects, including school buildings, bathrooms and a water catchment system, and engaged in several community service projects.

Is this the future of military medicine in an HA/DR environment? Some might argue that it isn't the future. It's the present.

Comfort & Hope

By Mass Communication Specialist 1st Class (SW) Kim Williams
Continuing Promise Public Affairs

Photo from Continuing Promise Public Affairs

"I first noticed the pain almost three years ago. I could not lay on my left side."

- Martha Mulatillo Cuello, surgical patient during operation Continuing Promise 2011

Hope has different meanings to many people. For some, it represents a chance to positively influence another's life, giving them added value in the place of pain and dismay. For others, it is the chance to assist the less fortunate on a global scale, while simultaneously making a medical mark on the world.

Such is the case for a team of surgeons, doctors, nurses and corpsmen embarked on board USNS Comfort for Operation Continuing Promise 2011 (CP11). For them, hope stood for the unique opportunity to "Help. Other. People. Everywhere." For one of their patients, it meant a new lease on life.

On May 1, 2011, at the Sagrado Corazon de Jesus medical site in Paita, Peru, a petite, 66-year-old Peruvian matriarch named Martha Mulatillo Cuello entered the CP11 Peru medical screening process. For Martha, a referral for surgery on board the ship would mean freedom from her more than two-year burden, which came in the form of a 10 and a half-pound ovarian tumor. The small elderly woman toted the mass, which looked similar in size to a nine-month old fetus, inside of her body on a daily basis adapting to life with what she referred to as, her "naughty baby."

"I first noticed the pain almost three years ago," said Cuello referring to the tumor on her left ovary. "I couldn't sleep very well because I could not lay on my left side," she added with a look of angst on her face.

Cuello and her daughter traveled more than 12 hours from their home in Ica, Peru near the Ecuadorian border to come to the Continuing Promise medical site in Paita. After waiting for a long stretch of time in line, Cuello and her daughter were escorted to the patient administration process where the CP11 team would determine her need.

Patients undergo a multi-step screening process to determine if they are fit for surgery on board USNS Comfort (T-AH 20), the platform for medical and dental treatment beyond basic care.

"The Ministry of Health for each nation pre-screens patients for us to see prior to our arrival in country," said Navy Capt. William Todd, director of surgical services for CP11. "They come to our sites and then we take a look at them, find out their concerns and then triage them to the appropriate surgeon."

After filling out medical history and emergency point of contact forms and other pertinent information sheets, the CP11 staff determined that Cuello would be a surgical fit.

Now, after being accepted as a candidate for surgery, Martha learned that she would soon be delivered from the daily agony, which accompanied her for so long.

Martha Mulatillo Cuello, a 66-year-old Peruvian woman, gets a 10 and a half pound ovarian tumor removed aboard the USS Comfort during Operation Continuing Promise 2011.

> "It's nice to see we can make a difference and it's great to use our training to impact people's lives."
>
> - Lt. Erin Watson, Operating Room nurse

Cuello was the third patient referred to General Surgeon Navy Capt. Beth Jaklic that sunny day in May.

"During our screening, the patient explained to me that many Peruvian doctors said that there was nothing they could do for her," said Jaklic.

"So, after screening her initially as a general surgery patient and giving her a referral for a CAT scan on board, we discovered that she had a benign, cystic fluid-filled tumor on her left ovary and was more suited for gynecology."

Once Cuello was admitted for CAT Scan, Jaklic noticed that her ovary was suffering a traumatic amount of force as a result of the large mass attached to it.

"It was not just the pressure of this ten-pound mass that the patient was feeling daily, but her ovary was twisted, which was causing a lot of pain," said Jaklic. "It is not hereditary, but it just happens to some women. In the states, it is very uncommon to see an ovarian tumor of this size because it is usually caught before it grows this big."

Upon diagnosis of Cuello's specific ailment, the CP11 medical Ethics board cleared her for surgery.

"Candidacy for surgery is a decision left to the surgeon, anesthesiologist and patient assuming they are able to make an independent decision," said Lt. Cmdr. Brian Feldman, CP11 Medical Ethics Committee chairman. "The ethics committee is dedicated to providing counsel pertinent to the principles of patient autonomy, beneficence, non-malfeasance and justice."

In the case of Cuello, the committee evaluated several risks and benefits of performing surgery on her including the risk of unnecessary increased morbidity if the mass was found to be malignant and the context of fewer capabilities for additional treatment, if needed, in her host nation.

"After evaluating the risks of surgery and benefits, consulting with various experts in the field on the standard of care both in the United States and in Peru, even should no further treatment be needed, we agreed with the decision to proceed with the surgery," said Feldman.

Jaklic operated alongside gynecology surgeon Lt. Cmdr. Katherine Austin with the assistance of Operating Room Nurse Lt. Erin Watson, who worked closely with the patient from the initial screening site ashore.

"It was a relatively straight forward, 90-minute surgery," said Jaklic, a seasoned surgeon with more than 15 years of practical surgical staff experience who counts Comfort as her second shipboard workspace. "It wasn't a 12-hour, heroic operation and was very easy for us to do. It was a very routine operation."

"This patient had this condition for several years and has had to live with it because of various reasons, so the fact that we were able to do the surgery and essentially change her life, hopefully for the better is great," Dr. Austin pointedly remarked. "It's important to not only provide healthcare, but to also get to know your patient and to build partnerships beyond medical care to other aspects of life," she added.

The partnerships that team Comfort built by ensuring that both patient and daughter were well taken care of before, during and after her brief surgery, meant that they made two new life-long friends.

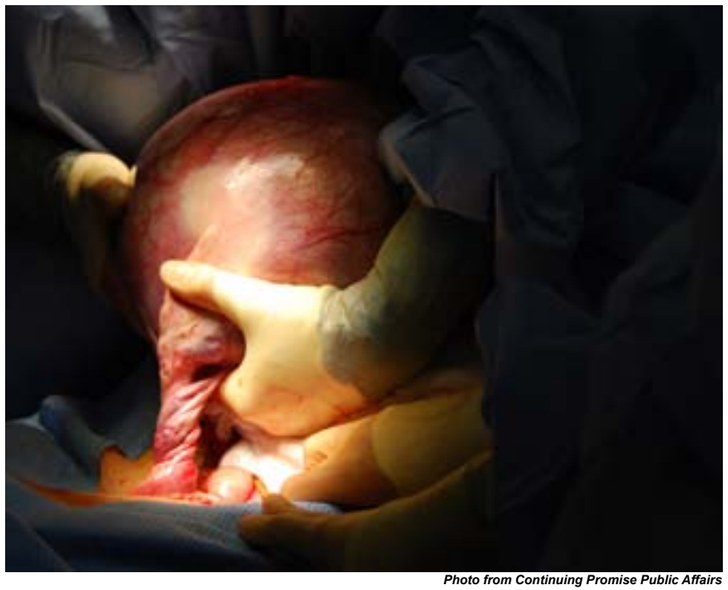


Photo from Continuing Promise Public Affairs

A surgical team aboard the USS Comfort removes a gets a benign, cystic fluid-filled tumor from the left ovary of a 66-year-old Peruvian woman during Continuing Promise 2011.

"She hugged us everyday," said Lt. Watson referring to the elder Cuello. "Most of the patients we've seen, but especially her with her smile, are people that I'll always remember for the rest of my life," Watson said with an endearing smile. "It's nice to see we can make a difference and it's great to use our training to impact people's lives."

Cuello, accompanied by her daughter, recovered onboard Comfort in the ship's patient after-care ward for three days prior to departing the ship for their home in northern Peru, but the small amount of time they spent on board did not go without touching both the staff and other patients alike.

"She was very happy, but I felt rewarded knowing I had made a difference and due to the fact of how appreciative she and her daughter were," said Austin. "It only took a few hours of our time in the grand scheme of things, but it made a complete change and difference in her life and that was great to see. Other patients around her were so happy and everyone seemed so appreciative for what we'd done for her."

"We perform a number of surgeries during CP11 and I know that everyone benefits, but it is the unusual stories, the cases like this patient, that touch your heart," said Jaklic. "It's the patients that you really affect their quality of life, that what we were able to do for them truly changed how they live that you remember. This is one of them, one of those big impact cases and it is rewarding."

COMUSNAVSO/COMFOURTHFLT supports U.S. Southern Command joint and combined full-spectrum military operations by providing principally sea-based, forward presence to ensure freedom of maneuver in the maritime domain, to foster and sustain cooperative relationships with international partners and to fully exploit the sea as maneuver space in order to enhance regional security and promote peace, stability, and prosperity in the Caribbean, Central and South American regions.

Photo by Mass Communication Specialist 2nd Class Jonathen E. Davis

The Military Sealift Command hospital ship USNS Comfort (T-AH 20) anchors off the coast of Tumaco, Colombia, June 2, 2011, during Continuing Promise 2011 (CP11). CP11 is a five-month humanitarian assistance mission to the Caribbean, Central and South America.

Photo from Continuing Promise Public Affairs

Martha Mulatillo Cuello (center), a 66-year-old Peruvian woman, visits with medical staff aboard the USS Comfort after having a 10 and a half pound ovarian tumor removed during Operation Continuing Promise 2011.

Educating Corpsmen

Story By Tami Begasse
Naval Hospital Jacksonville Public Affairs

Photos by Mass Communication Specialist 2nd Class Gary Granger

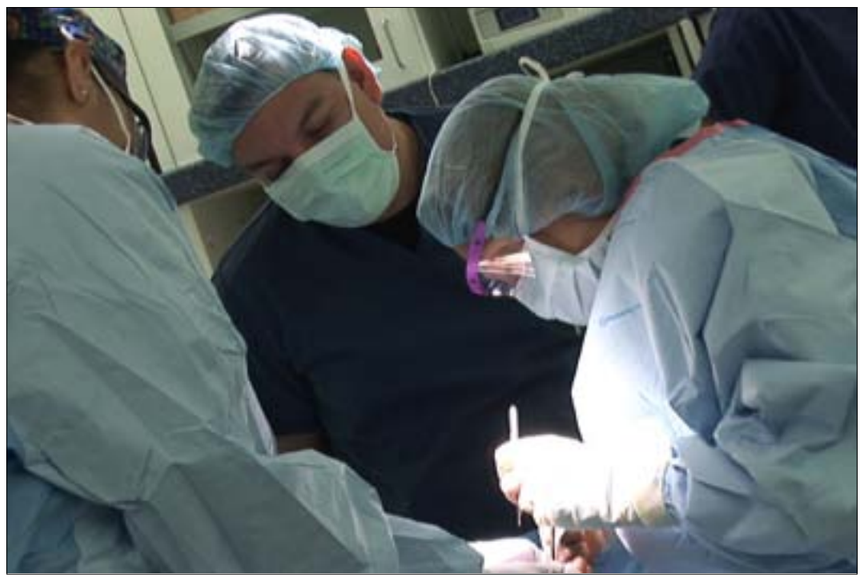
"A convenient place shall be set apart for sick or hurt men, to be removed with their hammocks and bedding when the surgeon shall advise the same to be necessary: and some of the crew shall be appointed to attend to and serve them and to keep the place clean. The cooper shall make buckets with covers and cradles if necessary for their use," reads Article 16 in the Rules for the Regulation of the Navy of the United Colonies of North America of 1775 which provided the first direction to the organization of Navy Medicine.

So began the legacy of valor, sacrifice and courageous care provided by the Navy Hospital Corpsman. Whether taking the name of cooper, loblolly boy, surgeon's steward, apothecaries or hospital corpsmen, enlisted members of the Navy Hospital Corps have served alongside Marines and Sailors providing medical care to those in need since the Revolutionary War – often as the only medical provider. Today, approximately 26,000 corpsmen serve around the world – on ships, at clinics and hospitals, on submarines and on battlefields from Afghanistan and the Horn of Africa, to the Philippines and South America.

Ensuring these medical specialists have the best training and education possible to care for the nation's heroes is something Naval Hospital Jacksonville (NH Jax) takes very seriously. Its unique approach to training is designed to make certain its almost 750 hospital corpsmen are 100 percent ready to provide operational support and care to those in need 100 percent of the time.

"Our enhanced medical education for our corpsmen improves care and patient safety while setting the standard for all Navy medical treatment facilities," said Naval Hospital Jacksonville Commanding Officer Capt. Lynn Welling. "We provide the most comprehensive approach to hospital corpsman training to ensure the best possible care is provided to our heroes here at home and those deployed around the world."

The command's approach focuses on three key areas: bedside care through its Hospital Corpsman University (HMU), improved care for forward deployed forces through its Independent Duty Corpsman (IDC) Center of Excellence (COE) and enhanced experience in combat medicine and tactical field care through its Tactical Combat Casualty Care (TCCC) Course. NH Jax Director for Nursing Services Senior Enlisted Leader, Senior Chief Hospital Corpsman Michael Holmes, developed HMU as well as the IDC COE.



HMC Eduardo Linares (center) brushes up on his surgical skills in preparation for deployment as an independent duty corpsman (IDC), as part of Naval Hospital Jacksonville's IDC Center of Excellence training program. All IDCs at NH Jax deploy as independent medical providers to remote duty stations.

HMU CENTERED ON BEDSIDE CARE

Established in September 2009, NH Jax's HMU graduates about 110 students annually. The enhanced education is designed to develop and train corpsmen in preparation for assignment to the command's hospital and five branch health clinics as well as to operational units and tactical environments worldwide within 90 days of their arrival. This immediate training is especially important as NH Jax is the second-most deployed medical treatment facility in the Navy, with up to 15 percent of its military deployed at any time.

"HMU is centered on the delivery of bedside care in a safe, highly structured and supervised program," Holmes said. "Since students are care extenders for medical and nursing staff, we work closely with the Human Resources Department to place the right corpsman in the right job at the right time."

NH Jax HMU consists of 60-90 days of eight-hour clinical rotations, Monday through Friday, on its four inpatient wards.

Also critical to the advanced training is a weekly, two-hour classroom component held by guest lecturers from throughout the command to promote a better understanding of advanced concepts learned at the bedside. The classroom also provides students a place to voice questions raised after further study away from the bedside, which is especially important since student testing involves baseline and final exams as well as unit tests.

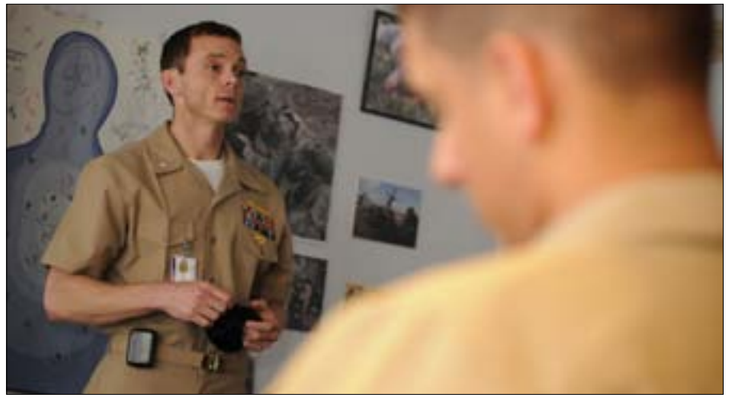
"I see Naval Hospital Jacksonville's HMU as an extension of the training I received at Hospital Corps School," said recent HMU graduate, HN Jason Lovin, who is assigned to the hospital's Ear, Nose and Throat Clinic. "By combining textbook learning with hands-on experiences, I feel better equipped to care for our patients."

NH Jax's approach in HMU also ensures corpsmen report ready for department orientation without any interruptions for non-departmental training. The graduate reports with all training recorded in Fleet Training Management and Planning System along with completion certificates and creation of a division officer training folder.

"Ultimately, HMU is about nurturing professional sailors with a good working knowledge of the health care system," Holmes said. "We also want to make sure we deliver corpsmen who are deployment-ready."

As the only command offering this program, Holmes was one of several NH Jax personnel asked to provide presentations at the 2011 Military Health System Conference. Since that

Hospital Corpsmen stationed at Naval Hospital (NH) Jacksonville navigate an obstacle course while carrying a patient, a training dummy, to simulate a realistic combat environment as part of the NH Jacksonville's Tactical Combat Casualty Care.



Naval Hospital Jacksonville Orthopedist Cmdr. Robert Beer walks students attending the Hospital Corpsman University through the use of tourniquets in the field as part of his combat training. Classroom time is a key aspect of the enhanced education provided to Navy hospital corpsmen attending HMU.

time, NH Jax has had many requests for information from multi-service organizations wanting to develop similar programs. Naval Hospital Guam is exploring joining together the HMU program with its Medical Homeport – the new Navy-wide approach to primary care that places patients in the center of a team of caregivers. Naval hospitals in Pensacola, Fla. and Camp Pendleton, Calif. as well as the Federal Healthcare Center in North Chicago are also interested in the benefits the program can bring to their facilities. And the new Hospital Corps School in San Antonio is interested in integrating the approach with its tri-service medic training beginning this year.

IDC COE AIMS TO IMPROVE CARE FOR FORWARD DEPLOYED FORCES

The second unique program offered by NH Jax is its IDC COE, which has been in place since January 2011. NH Jax is the premier training facility for independent duty corpsmen in the Navy. The program complements the already rigorous training mandated by the Bureau of Medicine and Surgery (BUMED). The core curriculum covers an intensive six-week rotation in surgery, emergency medicine, gynecology, urology, orthopedics and dermatology. In addition to the six required rotations, IDCs have three elective rotations to areas such as internal medicine, neurology and pediatrics.

"Our IDC Center of Excellence prepares our IDCs with a level of enhanced training unmatched by other medical treatment facilities," said Chief Hospital Corpsman Shawn O'Reilly, one of 24 IDCs billeted at NH Jax and the current IDC COE program manager. "The goal of the program is to train independent duty corpsmen for their eventual rotation back to arduous and isolated duty with Sailors and Marines forward deployed in austere environments."

The new training program utilizes specialty clinics at the hospital and branch health clinics to put into practice competencies outlined in the Shipboard Medical Procedures Manual. This approach ensures NH Jax's ability to enhance the IDCs in their respective clinics and eventually the fleet. These same IDCs then become mentors to some of the hospital's junior general medicine officers both in the clinics and in the fleet—an important secondary part of being the IDC.

NH Jax also uses its rotational program for potential IDC students. The command takes approved IDC-packaged students and tries to place them in the rotational program, allowing time to gain knowledge from experts before going to IDC School at Naval School of Health Sciences in San Diego.

"This is a great advertising tool for us – come learn from the experts on various aspects of clinical medicine -- this is what you will do as an IDC." said O'Reilly. "We shock-load the IDC's when they first get to the command – three weeks of an intensive program through a mix of core or elective training. This is to introduce them back to clinical life, expose them to some of the specialty clinics that they may be working with, and make it easier for the next year's training program with three of the rotations already out of the way. We do this again when they are getting ready to transfer. This allows the IDC to get a final highlight of education before leaving, thus ensuring that they have the latest and greatest 'tools' in their box when needed for independent duty."

The benefits of the program are immense, and include enhanced medical education of IDCs, improved care for forward deployed forces and improved patient safety. What's more, the IDC COE also ensures future IDC's are exposed to more aspects of patient care to better prepare them for school.

TCCC COURSE ENHANCES TACTICAL FIELD CARE

The final aspect of NH Jax's enhanced hospital corpsman training is delivered through its TCCC Course, which was built in 2008.

BUMED officially made TCCC the Navy's standard of care on the battlefield, making initial care for the wounded combatant — regardless of service affiliation — consistent across the board in all of the military services.

While TCCC training is required of all corpsmen, NH Jax is one of just a handful of military treatment facility with an obstacle course to provide field training focused on combat-related trauma care. The course was dedicated in memory of Hospital Corpsman 3rd Class Julian Woods, a Jacksonville native who was killed during Operation Phantom Fury in Fallujah, Iraq in November 2004. Every month, approximately 20 hospital corpsmen participate in the week-long training aimed at preparing them for the challenges they will face when deployed to support combat needs. The on-site classroom at the NH Jax TCCC obstacle course is set up to simulate a combat field hospital using the very same equipment found in the many combat environments to which Navy corpsmen deploy. The instructors offer extensive knowledge and experience in the areas of combat medicine and tactical field care. The course produces value-added training and support capabilities to the Navy and Marine Corps worldwide by better preparing hospital corpsmen for hostile combat conditions.

In the midst of simulated enemy action, HN Vince Gibson performs a surgical airway on a mock patient at Naval Hospital Jacksonville's Tactical Combat Casualty Care Course.

NH Jax is setting the standard for all Navy medical treatment facilities with its comprehensive approach to educating hospital corpsmen through its HMU, IDC COE and TCCC Course, Even before Welling took command of NH Jax, he saw firsthand the quality of corpsmen coming from the hospital. "While I was commanding officer of Expeditionary Medical Facility Kuwait, I noticed the corpsmen I received from Naval Hospital Jacksonville consistently demonstrated highly developed skills – something I attributed to the intensity of training received there."

"We're doing something special here." Welling concluded.

For more information about NH Jax's training, contact Staff Education and Training at (904) 542-7860. HMU program materials and a detailed presentation can be found at: https://wwwa.nko.navy.mil/portal/navymedicine/home/mhsconference2011.

As part of his pediatric clinic rotation, Naval Hospital Jacksonville Director for Nursing Services Senior Enlisted Leader HMCS Michael Holmes examines Dialeuvhyantae "D.J." Royal while NH Jax Pediatric Clinic Department Head Lt. Cmdr. Denise Whitfield looks on.

Enhancing Care

Tactical Medical Logistics Planning Tool used to determine medical requirements

By Carrie Brown, Vern Wing and Michael Galarneau
Naval Health Research Center

Military medical personnel stand up a forward resuscitative surgical system (FRSS) in the field. It will provide emergency surgical interventions to stabilize warfighters who might otherwise die or lose limbs before reaching treatment. Because it is forward located, casualties will get to the FRSS fast and, once there, the right staff will be available to treat them. The equipment being unpacked and installed will provide exactly what the medical personnel need, without the burden of unnecessary items that require additional space and cost. Within hours, a fully-functioning medical treatment facility will be available to provide life-saving care, and transportation will be available to quickly move casualties in and out. This specific facility, its location, and all the associated assets were carefully planned through virtual means, without risking actual lives and for far less cost than conducting live exercises or war games. To do this, medical planners used modeling and simulation tools to determine the minimum capabilities necessary to maximize medical outcomes and ensure the success of this FRSS and the entire expeditionary medical mission.

Photo by Lance Cpl. Jeff Drew

Army soldiers and Navy Corpsman remove a simulated casualty from a UH-60 Black Hawk helicopter during casualty evacuation training. Using TML+ to model the expeditionary medical environment, planners can forecast what transportation assets will be necessary to move patients to the next medical facility in the specified network of care.

Introduction

To prepare for a medical support mission, planners needed a tool to model medical treatment in far-forward environments. The Naval Health Research Center (NHRC), San Diego developed an integrated, clinically-based, medical requirements planning platform called the Tactical Medical Logistics Planning Tool (TML+), which incorporates material data that is linked to clinical workload forecasts and clinical practice guidelines (CPGs). This end-to-end, integrated tool permits the simulation of the full spectrum of medical capabilities in a realistic operational environment. Using TML+ to model the expeditionary medical environment, planners can forecast the number and type of ill and injured casualties anticipated in a specific mission, what providers will be needed to treat them, the equipment and supplies required, how long the treatment will take, and what transportation assets will be necessary to move patients to the next medical facility in the specified network of care. To date, NHRC has conducted studies using TML+ for the Office of the Assistant Secretary of Defense, Health Affairs-Force Health Protection (OASD HA/FHP), Chief of Naval Operations (N81), Navy Bureau of Medicine and Surgery (BUMED), Office of Naval Research (ONR), U.S. Marine Corps, U.S. Navy, and U.S. Air Force.

TML+

TML+ is both a research tool that models patient flow from the point of injury through more definitive care, and an analysis tool that supports operational risk assessment, field medical services planning and systems analysis. TML+ includes a significant amount of underlying data, containing over 400 injury and illness conditions expressed as International Classification of Diseases, 9th Revision diagnostic codes, medical treatment tasks for each of the diagnoses, the medical personnel required to perform those tasks, treatment times for each task, and consumable supplies and equipment to execute each task. It also includes data on died of wounds due to treatment delay and died of wounds due to complications. TML+ provides the capability to model medical treatment facilities at all levels of care and their respective functional areas, the number and type of personnel, and the type, speed, and capacity of transportation assets. NHRC generated these underlying information sets over many years by studying and gathering empirical and historical data.

TML+ uses stochastic processes to model patient arrivals, treatment, and outcomes as they flow from the point of injury through a network of medical treatment facilities. Through stochastic methods, controlled randomness is introduced into the modeling process within specified study parameters. As a result, much more

... it is vital that our networks of care administer the best possible treatment while optimizing every available resource.

Photo by Tech. Sgt. Tony Tolley

Hospital Corpsman 1st Class Edward Schultz and Hospital Corpsman 2nd Class Crystal Bullock organize medications at the Tuanekivale medical site during Pacific partnership 2011. Using TML+ planners can forecast the medical supplies and equipment needed to execute a specific mission.

U.S. Navy medical personnel go over broken bone procedures in the Forward Resuscitative Surgical System (FRSS) facility in Boane. FRSS facilities provide emergency surgical interventions to stabilize warfighters who might otherwise die or lose limbs before reaching treatment.

Photo by Lance Cpl. Jad Sleiman

powerful statistical methods can be applied to generate the results, which helps inform the risk analysis decision making process. In TML+, this means users can test the limits of their assumptions to see if different medical treatment networks provide better or worse health outcomes and quantify risk as a function of the scenario. In our opening example, the FRSS's optimal tactical location was determined through "what if" analysis by weighing alternative locations against patient mortality.

In TML+, users create a proposed medical network of care and enter anticipated scenario lengths, anticipated injury types (wounded in action, disease and non-battle injuries, and behavioral health casualties), levels of care, and transportation assets into the modeling application. The simulation also permits the medical network to be synchronized with combat operations. TML+ provides a dynamic report navigator detailing casualty generation, care providing, transportation metrics, and clinical outcomes (number of returned to duties, MEDEVACs, and died of wounds) in a variety of tabular and graphic formats.

What can you do with TML+?

TML+ provides a realistic approximation of real-world scenarios that are useful and insightful. TML+ has two primary uses in the medical planning process, research and analysis.

Research

One of TML+'s principal application is as a research tool for course of action planning. It can help optimize a mission's goals, maximize results, and organize the implementation. DoD organizations employ TML+ in many ways. It can be used to establish whether a particular medical treatment facility can successfully handle a specific patient stream, and it can demonstrate how changing the distance among treatment facilities with different capabilities affects patient treatment. TML+ can also show the personnel, supply, and transportation assets used by the expected patient stream. Additionally, it can determine whether one network of care (types, locations, and number of assets) is more effective at treating patients than another. TML+ has the capability to model operating room, intensive care unit, emergency room, triage, lab, x-ray, and ward functionality to analyze the efficacy of a medical treatment facility down to the functional level.

Analysis

TML+ is also an analysis tool that allows medical planners to perform different types of assessments. In deliberate planning, TML+ is used before deployment to conduct risk assessments, and determine the medical assets and networks of care that would best treat an expected patient stream. The tool can also be used to assess the assets designated for a mission and justify acquiring additional or different ones, all in the context of providing a high standard of medical care. TML+ provides crisis-action planning capabilities during deployments to reconfigure the medical network of care and its assets in response to unforeseen tactical events and mission restructuring. Time is critical during a crisis, and the ability to quickly model several alternative scenarios can provide a crucial edge to a planner who needs to quickly decide on a course of action as a function of changing operational conditions. In near real-time planning, TML+ is used to track how patient treatment and evacuation events proceed as the mission is performed, helping planners respond to a rapidly changing warfighting environment. This versatility provides medical and non-medical planners with a view of the medical mission and how it fits within the operational context.

Navy Medical Evacuation Coordinator, Hospital Corpsman 2nd Class Nicholas Cockrill, discusses patient care and medical treatment with an Airforce flight surgeon/nurse during a simulated MEDEVAC flight exercise. Using TML+ to model the expediationary medical environment, planners can forecast what transportation assets will be necessary to move patients to the next medical facility in the specified network of care.

Photo by Hospital Corpsman 3rd Class Ryan John Keith

Why it matters

At a time when military medical resources are stretched to the limit, it is vital that our networks of care administer the best possible treatment while optimizing every available resource. In support of combatant commanders, as they prepare to project America's power, military medical planners now have the Tactical Medical Logistics Planning Tool (TML+) to help them determine the minimum medical capabilities necessary to maximize medical outcomes and ensure the success of the expeditionary medical mission. Ultimately, the application of TML+ has reduced costs, morbidity, and mortality through the use of strategic advanced planning and assessment of multiple "what if" scenarios. Further, it allows more optimal resource utilization—from fuel consumption to manpower. Used in support of deliberate planning, TML+ provides the analyst with the capability to model the entire, time phased employment of medical facilities and the associated transportation network, personnel, and supplies—all synchronized with the operational plan.

NCCOSC provides key training

By Naval Center for Combat & Operational Stress Control Public Affairs

When members of the Navy's Mobile Care Team 4 (MCT) arrive in Afghanistan this summer, they will have just completed training provided by the Naval Center for Combat & Operational Stress Control (NCCOSC) that they can immediately use to assist Sailors serving as Individual Augmentees (IAs) with preventive psychological care.

"We've been able to give them practical, just-in-time training before going in country," said Patrick Nardulli, an outreach speaker and curriculum developer for NCCOSC. "The education and tools we've provided will help clarify their role and fulfill expectations."

Nardulli, a retired chief petty officer and corpsman, said training included in-depth discussions about the MCT philosophy and applying Navy OSC tools to identify behaviors that indicate a Sailor may be reacting to stress. Practices that contribute to building psychological resilience to thwart stress injuries were presented, as well as real-life scenarios to help illustrate the challenges IAs often face on deployment.

MCTs were established by the Navy Bureau of Medicine and Surgery to present a blend of psychological assessment and prevention services to support IAs. Members of the team will conduct behavior health surveys and focus groups from multiple Navy units while on their seven-month mission.

Some data will be analyzed on site to provide leadership with a quick psychological look at a unit, with a more in-depth analysis available shortly thereafter. Team members also will meet individually and in small groups with Navy personnel to provide education in combat and operational stress control.

"We will not be serving in the typical mental health care role, but primarily acting as a consultant to leadership," said Cmdr. Alan Nordholm, research psychologist and Team 4 officer in charge.

Other members of the team are clinical social workers Lt. Cmdr. John Ford and Lt. Marlo Narro; Lt. Cmdr. Dave Morgan, a mental health nurse practitioner; and hospital corpsman Elisha Greasham, a psychology technician.

"We'll be able to get a handle on such things as whether a unit is having sleep problems or if a number of Sailors are going through some rough family times," Nordholm said. "We'll also be able to suggest resources for leaders to use to prevent psych problems."

Nordholm's team is the fourth MCT to be deployed to Afghanistan, but the first to have received training from NCCOSC. He and other team members were impressed with the information they received.

"NCCOSC has done a great job in providing us with briefing tools," said Nordholm. "It has given us the right cards to start the discussion and make the best recommendations to leadership."

Added HM3 Greasham, "I feel better prepared in how to communicate with the IAs, and I have a better handle on what to expect. And being better prepared is going to help us from being stressed."

Capt. Scott L. Johnston, director of NCCOSC, said the training provided to the MCT is a good example of the collaborative role the center plays in providing education to diverse Navy communities.

"The MCTs are going to have direct contact with service members in theater, and we were able to tailor the training to best serve these warfighters," Johnston said.

Navy Research Competition

Winner shows drug reduces surgical pain

Story and photo by Mass Communication Specialist 2nd Class Nikki Smith
Naval Medical Center Portsmouth Public Affairs

Naval Medical Center Portsmouth (NMCP) hosted the 26th Annual Navy-wide Academic Research Competition on May 12 with Cmdr. Greg Nezat, an anesthesiology nurse and department head of nursing research at NMCP, winning first place. He and his team represented Navy Medicine East in the competition.

The six presenters had been chosen through the previous oral and poster phases of the competition in their respective regions: Navy Medicine East, Navy Medicine West and National Capital Area. Three competed on the trainee level and three on the staff level.

Each competitor had 12 minutes to give their presentation to the judges and five minutes to accept questions. Judging was based on how the presenter carried themselves, their PowerPoint slideshow, how well they answered questions and the judges' overall impression of the research presentations.

Rear Adm. Bruce A. Doll, Joint Forces Command surgeon and medical advisor for NATO Allied Command Transformation, was one of the four judges for the competition.

"This was a very motivated bunch," Doll said. "It was such a pleasure to listen to them, and it really came down to very fine hair splitting to judge for first through third place."

After the judges deliberated to place the trainees and staff competitors, Rear Adm. Alton L. Stocks, NME and NMCP commander, presented each with their award certificate.

Nezat and his team's research project investigated how lidocaine can reduce pain and inflammation in women undergoing same-day surgical procedures. Nezat did the principal investigation and obtained a grant from the Navy Bureau of Medicine and Research. He has been working on the project for two-and-a-half years and said that seeing the results of his research and generating knowledge among peers has been the best part of the research experience.

Although the use of lidocaine during same-day procedures is a technique some doctors use, Nezat is hoping that his research results promote its usage and more physicians in the military health system will implement the technique. Shedding light on the positive results of the research can advance military physicians in their practices in order to benefit patients.

"All practitioners have a different way of treating patients," Nezat said. "This research confirms beliefs about lidocaine and we are hoping that with this research and knowledge in place more practitioners here will use the findings to help their patients."

In order to win the competition, Nezat and his team had to compete in the poster competition which attracted more than 100 other researchers throughout the east region. Nezat then went on to compete at NMCP in the oral competition against other NME poster competition winners. This is Nezat's third year to compete; he placed first in the poster competition his first two years, but did not make it to the finals.

"It feels really great to win this here at Portsmouth on home turf," Nezat said. "Portsmouth hasn't taken first place in a few years, and I'm really proud that I could compete as a representative of Portsmouth and win."

Lt. Cmdr. Ruben Acosta from the National Naval Medical Center was awarded second place in the staff presenter category with his research presentation on the study of the seroconversion of helicobacter pylori infection among U.S. military members deployed in Operation Iraqi Freedom. Third place was awarded to Lt. James Prahl who represented Navy Medicine West with his presentation about lung inflammation and altered pulmonary functions following blast exposure.

All finalists will present their research projects at the 2nd Annual Navy Medicine Research Conference in June at the Uniformed Services University of the Health Sciences in Bethesda, Md.

At the 26th Annual Navy-Wide Academic Research Competition hosted by Naval Medical Center Portsmouth May 12, research competitors show off the plaque that will be hung at the Navy Bureau of Medicine and Surgery boasting the name of the first place winner. From left, Rear Adm. Alton L. Stocks, Navy Medicine East and NMCP commander, Cmdr. Greg Nezat, Lt. Kevin Michel, Lt. Cmdr. Jason McGuire, Lt. Alan Strawn, Lt. James Prahl and Lt. Cmdr. Ruben Acosta.

Hospital corpsman awarded Silver Star

By Navy Medicine Support Command Public Affairs

Courtesy photo

Hospital Corpsman 1st Class Amilcar Rodriguez, was awarded the Silver Star for actions on Nov. 6, 2009, while serving as a combat adviser and corpsman with Marine Special Operations Company F, 2nd Marine Special Operations Battalion, Marine Special Operations Regiment, Special Operations Command, during Operation Enduring Freedom while deployed to Afghanistan.

FORT BRAGG, N.C. – A Navy hospital corpsman was awarded the fourth highest military honor during a June 24 ceremony at the U.S. Marine Corps Special Operations Command (MARSOC) at Marine Corps Base Camp Lejeune, N.C.

Hospital Corpsman 1st Class Amilcar Rodriguez, was awarded the Silver Star for actions on Nov. 6, 2009, while serving as a combat adviser and corpsman with Marine Special Operations Company F, 2nd Marine Special Operations Battalion, Marine Special Operations Regiment, Special Operations Command, in support of Operation Enduring Freedom while deployed to Afghanistan.

Rodriguez, an Avon, Conn., native originally from Caguas, Puerto Rico, is a trauma instructor at the Naval Special Operations Medical Institute (NSOMI), the Navy detachment within the Army Joint Special Operations Medical Training Center (JSOMTC) at Fort Bragg. He accepted the award in front of family and friends, crediting his actions during the four-hour gunfight to his training and experience gained during multiple missions, emphasizing the team work and camaraderie of his Company F teammates.

"This is recognition of what my team and I went through and how we reacted to the situation," said a humble and understated Rodriguez. "I had multiple roles on the team, and during that encounter I was prioritizing as well as being a corpsman for the team."

According to the citation, Rodriguez and an Afghan partner had established a rooftop over-watch position. Shortly after, a U.S. Marine and two Afghan Commandos who were part of Rodriguez' team were wounded by an enemy sniper. Rodriguez immediately returned fire into the enemy position, killing two members of the opposing force, and, despite imminent danger, moved to the wounded Marine's position. While extracting the Marine, Rodriguez sustained three gunshot wounds from a sniper.

Other Marines pulled Rodriguez and the other wounded service members from the roof, during which time Rodriguez calmly directed the initial assessment and treatment of the injuries he and the other service member had sustained. Though seriously wounded, Rodriguez calmly instructed another medic during the stabilization of other injured personnel later in the engagement.

"Petty Officer Rodriguez' heroic actions are in keeping with the proud tradition of hospital corpsmen who deploy with Sailors and Marines worldwide, both in wartime and in peacetime," said Navy Surgeon General Vice Adm. Adam M. Robinson, Jr. "The bond that corpsmen share with Marines is like none other - it's sacred and unique. When our Marines deploy, they know they will be well-cared for, from the battlefield to when they return home. We will follow the Marines into heaven or to the gates of hell."

The Silver Star is awarded for gallantry in action against an enemy of the United States while engaged in military operations with a friendly force.

JSOMTC is a subordinate of the Naval Operational Medicine Institute in Pensacola, Fla., and the Navy Medicine Support Command in Jacksonville, Fla.

THE FUTURE OF NAVY MEDICINE ESSAY CONTEST

Essay Question: What will Navy Medicine look like in the years 2030 - 2040?

Guidelines: Describe what Navy Medicine will look like in the years 2030 - 2040, either in the broadest possible sense or in a particular area. Please consider both operational and beneficiary health care missions. Contestants are encouraged to base essays on logical constructs and to use references to support arguments. In other words, if you believe that Navy Medicine will be using nano-bots to repair tissue at the cellular level, then support your premise with articles about this technology and its potential use and benefits in the medical field.

Rules:

1. All submissions become property of Navy Medicine Magazine to use, reproduce, or distribute as it sees fit in its sole discretion, although authorship will be acknowledged.
2. By submitting an entry, the contestant warrants, that the work is original and does not violate the intellectual property rights of any other person or entity. In addition, by submitting an entry, the contestant grants permission to Navy Medicine Magazine to use her or his name for publicity purposes, including, but not limited to, announcing the results of the contest.
3. Submissions must be in Microsoft Word and may not exceed 1,200 words in length (excluding references). The title page should be separate from the rest of the submission and the author's name and identifying information should be set forth only on the title page. To ensure blind review, identifying information must not appear in the body of the submission itself.
4. The submission must not include names or descriptions of real people.
5. References, cover page, and essay need to be in APA format.
6. Any quotations or copyrighted material used in the essay must be identified. Failure to identify non-original material will result in disqualification.
7. The Bureau of Medicine and Surgery, M3/5 Futures and/or the Public Affairs Officer will have the right to edit, publish or otherwise duplicate any essay entered in the contest without payment to the author.
8. To be considered, entries must be received (received, not postmarked) by Sept. 9, 2011.
9. One entry per contestant is permitted.
10. Only Navy Medical personnel are eligible to participate (GS and active duty).
11. The decisions of the judges are final.
12. Winner shall have essay published in the Winter 2011 issue of Navy Medcine Magazine plus receive an award plaque and SG coin.

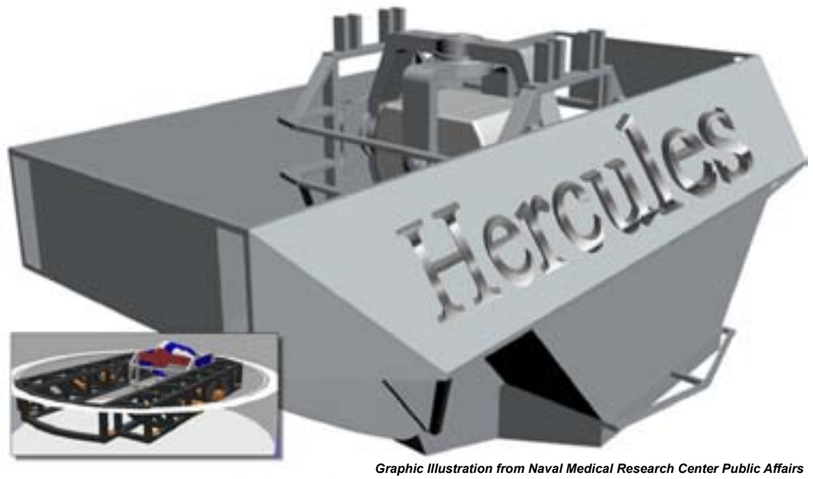
Mailing Entries: Place "Futures Essay" in the subject line. Those using regular mail should send their entries to Capt. Joseph Surette, 2300 E Street, N.W., Washington, D.C. 20372-5300.

Judging Criteria for essays:

1. Judging panel shall be made of five members
-Three from M5 (Futures)
-One from M1
-One from M3
2. Judging will be based on the following:
Organization of essay
-Introduction
- Body
-Conclusion
Quality of references
-Peer reviewed landmark article or study, seminal study, etc.
-Recognized experts in a particular field
Quality of analysis (i.e. linkages to Navy Medicine)
Quality of the writing (i.e. grammar, punctuation, etc.)
3. Score sheet shall be used to grade essay for content.
4. Judges will grade all essays individually.
5. All of the judges' scores will be added together. Highest total score will be the winner.
6. Capt. (sel.) Robert Fry, assistant deputy chief for future operations, has final decision authority in case of tie.

NAMRL and NAMRU-Dayton pursue solutions to spatial disorientation

By Lt. Cmdr. Philip Fatolitis
Naval Aerospace Medical
Research Laboratory



Graphic Illustration from Naval Medical Research Center Public Affairs

Artist's rendering of the NAMRU-Dayton Disorientation Research Device-Hercules, internal and external.

As the Naval Aerospace Medical Research Laboratory (NAMRL) in Pensacola, Fla. completes the BRAC transition to the Naval Medical Research Unit-Dayton (NAMRU-Dayton) at Wright Patterson Air Force Base (WPAFB), the laboratory's spatial disorientation expertise will be applied to the "next generation" research utilizing new state-of-the-science research facilities and devices.

Future spatial disorientation research will be enhanced by the laboratory's newest acquisition, the Disorientation Research Device (DRD)-Hercules. This Navy one-of-a-kind device will become a cornerstone of research in the new Joint Center of Excellence for Aerospace Research, Training and Education at WPAFB. This device will help researchers address fleet aeromedical problems that include spatial disorientation, cockpit design, motion sickness and associated inter-ventions, and visual and other sensory and acceleration issues.

The DRD-Hercules capabilities include the integration of a precisely controlled, dynamically changing acceleration environment providing six independent degrees of freedom with reconfigurable visual displays and data collection capabilities, including physiological monitoring and telemetry; simultaneous yaw, pitch and roll movement; sustained acceleration to 3g; and off-center rotation. The cockpit part of the DRD-Hercules has a total of 32 cubic feet of payload space to accommodate physiologic monitoring equipment to support fatigue, respiratory and cardiovascular research in unusual acceleration environments. The payload space is large enough to mount reduced oxygen breathing devices (ROBD) and air tanks in order to support hypoxia research.

... the research subject feels the forces experienced in an actual flight environment.

The unique cockpit design allows for man-in-the-loop mode in which the research subject who pilots the device controls movements within the capsule. These controls can be linked with a flight simulator so the research subject feels the forces experienced in an actual flight environment.

The cockpit design can accommodate a single research subject centered in the capsule or two research subjects side by side.

NAMRU-Dayton was activated October 6, 2010 during a ceremony at WPAFB as part of the 2005 Base Realignment and Closure Actions (BRAC) for Navy Medicine. Two laboratories combined, NAMRL, relocating from Naval Air Station Pensacola, and the Environmental Health Effects Laboratory, located at WPAFB since 1976.

NAMRU-Dayton conducts research in the areas of acceleration effects, aviation medical standards and personnel selection, physiological and cognitive effects of altitude, vision research, pulmonary health effects, neurotoxicology, neurobehavior, reproductive health and systems biology.

Photo from Naval Medical Research Center Public Affairs

A traditional multifamily compound in northern Ghana where Navy scientists have been working with Ghanaian researchers to better understand, treat, and prevent malaria.

Navy conducts joint infectious disease research with Ghana

From Naval Medical Research Center Public Affairs

Since 1996 the U.S. Navy has partnered with the West African nation of Ghana in designing and conducting public health research that measures the risk and impact of malaria. Researchers from the Naval Medical Research Center (NMRC) and U.S. Naval Medical Research Unit No. 3 (NAMRU- 3), along with their colleagues at the Noguchi Memorial Institute for Medical Research in Accra, Ghana and the Ghana Ministry of Health, have been working together to develop ways to control, prevent and treat malaria.

"Worldwide, malaria kills almost 100 humans every hour and is a constant threat to the lives and welfare of the people of sub-Saharan Africa," said Cmdr. David Fryauff, director of overseas malaria research in the Navy Malaria Program, NMRC, Silver Spring, Md. "Malaria is also the top infectious disease threat facing deployed military personnel."

The original goals of the joint effort were for Navy health and research professionals to help establish training and monitoring programs for the protection of human subject research; set up institutional review boards; and further develop or enhance personnel, laboratories and field sites, focusing on entomology, epidemiology, prevention, treatment and ultimately the conduct of malaria vaccine trials.

"This effort expanded to include three laboratories in Ghana (Accra, Kintampo, and Navrongo) and the Center for Malaria Research in Ouagadougou, the capital of the neighboring country of Burkina Faso. All four laboratories achieved Federal Wide Assurance (FWA) for their human research protections programs, making them eligible to receive federal research funding.

The Navy/Ghana collaboration was instrumental in winning a five-year malaria research grant from the U.S. National Institute of Allergies and Infectious Diseases for 2001-2006 and was successful in a grant renewal for 2006- 2011.

"More than 18 jointly authored reports have been published in peer-reviewed international biomedical journals and more than 50 oral or poster presentations have also resulted," said Fryauff. "In 2010 the main clinical laboratories in Ghana and Burkina Faso initiated two early phase malaria vaccine trials performed by Africans for Africans."

Over the last five years, the focus of the joint research has broadened beyond malaria to include outbreak investigations and cross-training in field and laboratory methods for the study of Leishmaniasis, influenza, Lassa fever and rotavirus.

"This has been a rewarding, and mutually beneficial relationship that will continue to bind our nations in scientific productivity," said Fryauff. "Enduring friendships and trust can be built by working together with other countries to monitor, prevent and treat malaria and other infectious disease threats."

Fryauff and his team from NMRC presented highlights from this 14-year joint research effort at the Armed Forces Public Health Conference, Hampton, Va. in March and they will also present at the 2011 EUCOM/AFRICOM Science and Technology Conference in Stuttgart, Germany June 13-17.

Medical supply estimating process saves lives on battlefield

By Shawn Richeson
National Health Research Center Public Affairs

On the battlefield, a corpsman rushes to aid a fallen warfighter, dragging him to the relative safety of a stone wall. He reaches into his Corpsman Assault Pack and removes a one-handed tourniquet to stop the flow of arterial blood. He reaches in again for a compression dressing to staunch the blood flow and dress the wound.

The corpsman performed these life-savings tasks because of his bravery and training. That he had what was required to save a life is a tribute to the efficacy of the logistics processes.

The Naval Health Research Center (NHRC) developed the Enterprise Estimating Supplies Program (EESP) to determine medical supply requirements for the U.S. Marine Corps. The Air Force and Navy now use EESP, also.

"Estimating supply requirements for treating battlefield illnesses and injuries is a critical component of the expeditionary medical resource planning process. This process underpins medical readiness and improves the success of the medical mission," said Mike Galarneau, department head, Medical Modeling, Simulation and Mission Support Department at NHRC in San Diego. "Using EESP, medical planners and logisticians are able to project optimal supply estimations and produce a variety of reports to analyze supply use by injury or by the tasks required for treatment."

In the course of military operations, warfighters and support personnel can suffer a wide variety of wounded in action, non-battle injury, disease and mental health conditions. In EESP, standard diagnostic codes are used to develop task profiles describing the step-by-step procedures for administering medical care. These task profiles are based on clinical practice guidelines and Tactical Combat Casualty Care Protocols, which describe the approved procedures for treating conditions in theater.

"The goal of using EESP is to ensure that injured personnel receive the best medical care available. Each task lists the required consumables and equipment needed," said Galarneau.

"As a result, every supply item in the projected inventory is directly associated with its own clinical requirement. EESP provides the capability to assess supply use across all levels of care, for ground and shipboard medical facilities, and across all medical functional areas."

More military personnel than ever are surviving their injuries. This trend is the result of many factors, including the application of empirically derived clinical practice guidelines, the development of Tactical Combat Casualty Care protocols, and the institution of a Joint Theater Trauma System. For these elements to improve casualty outcomes, the appropriate supplies and equipment must be available in the right quantities, in the right place, at the right time.

"EESP provides the crucial methodology to optimize supply estimation, allowing improvements in theater medical care to increase the survival rate to the highest point in military history," said Galarneau.

The EESP database includes more than 180 models representing Navy, Marine Corps, and Air Force military treatment facility clinical functional areas. The program's supply projection process is designed to constrain cost while increasing capability through enhanced standardization, modernization and redundancy reduction.

While such models are crucial for informing medical allowance reviews, they are also capable of supporting in-depth manpower requirements studies, field treatment capabilities analysis and various course-of-action assessments, added Galarneau.

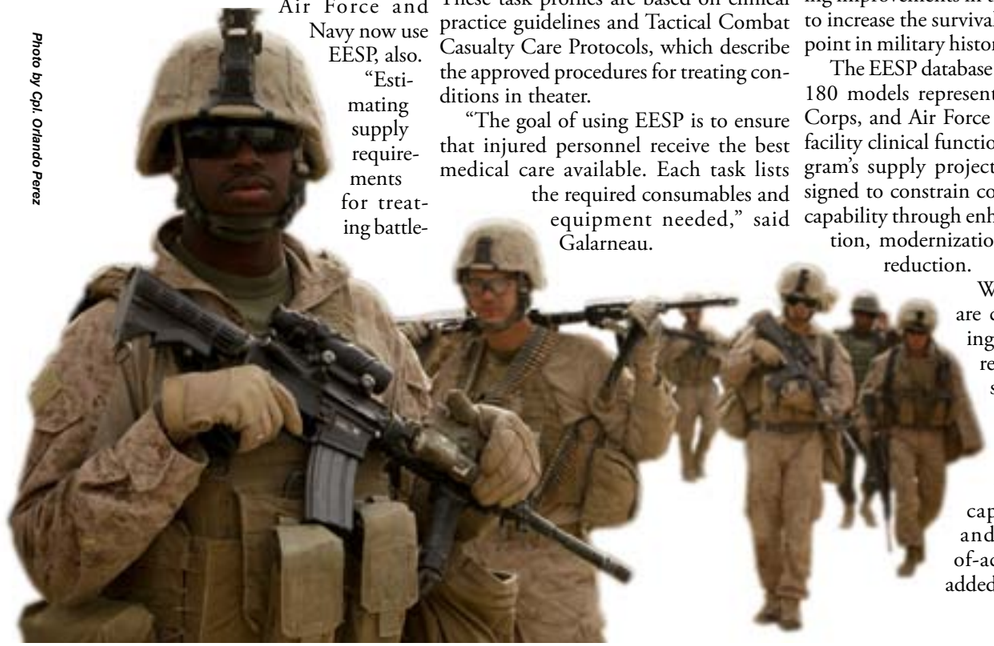


Photo by Cpl. Orlando Perez

Navy Hospitalman Chris McNeal and Marines assigned to Echo Company, 2nd Battalion, 3rd Marine Regiment, Regimental Combat Team-1, patrol the area Northeast of Combat Outpost Jaker. The Marines conduct daily security patrols to decrease enemy presence in the surrounding area.

NMLC addresses WAG for the fleet

By Sheila A. Gorman
Naval Medical Logistics Command
public affairs

Photo from Naval Medical Logistics Command Public Affairs

Naval Medical Logistics Command Biomedical Engineer Deniz Mackey plays a key role in a NAVMEDLOGCOM Engineering Services project designed to vent waste anesthetic gas (WAG) aboard Navy vessels. Using Mackey's plan, Navy leadership is implementing a month-long test to determine the need for WAG scrubbers in ships' medical spaces.

Naval Medical Logistics Command (NAVMEDLOGCOM), has taken on the task of researching, analyzing and providing a fiscally sound solution to waste anesthetic gas (WAG) aboard Navy ships.

If not vented properly, WAG can present an occupational hazard due to extended or prolonged exposure to trace levels of fluorocarbon-based waste and nitrous oxide.

The issue was tasked to NAVMEDLOGCOM's Deputy Director for Engineering Services, Rick McManis, and Biomedical Engineer, Deniz Mackey.

"Our goal was to find a solution to ensure that WAG was not vented directly from anesthesia machines into operating room spaces aboard ships," said McManis.

Mackey began by communicating with key stakeholders to pull historical data together to determine a better understanding of the thermodynamics and the ventilation structure of the ships.

One solution was to restructure ventilation systems on the ship to vent directly outside from the operating rooms.

As this proved to be an expensive solution, Mackey changed her focus to different types of WAG scrubbers that would capture and scrub the excess gasses as well as fit into the medical spaces aboard the ships.

Mackey assessed and analyzed the portability of the scrubbers, the types and frequencyof filter changes, what types of gases were being scrubbed by the units, were there indicators that alerted the need for filter replacement, and which units would work best at sea.

Completing a biomedical engineering analysis of the issue, Mackey came up with a thesis and provided a proposal to resolve the WAG issue on board Naval ships, which she delivered to all fleet medical and subject matter expert stakeholders for review and authentication.

"This month, Navy and Marine Corps Public Health Center is staging a month-long test to determine the need for these scrubbers within the fleet," said Mackey.

Making a difference every day to the fleet is what keeps Mackey loving her job as a biomedical engineer.

"There are so many interesting options out there to pursue in the engineering field. I love what I do," she said.

Infectious Diseases seminar series features Dr. Frederic Poly

From Naval Medical Research Center Public Affairs

The Naval Medical Research Center (NMRC) Infectious Diseases Directorate seminar series hosted Dr. Frédéric Poly from the NMRC Enteric Diseases Department April 15. Poly addressed a well-attended audience in the Behnke auditorium and discussed his research on the development of a multiplex polymerase chain reaction (PCR) to determine Campylobacter jejuni capsule types. C. jejuni is a major cause of bacterial diarrhea in developing countries, where its incidence is several orders of magnitude higher that in developed countries. These endemic regions represent a major health concern for deployed military troops.

To overcome this burden, a prototype monovalent capsule conjugate vaccine was developed by NMRC's Enteric Diseases Department that showed 100 percent efficacy against diarrhea in a study performed at the Naval Medical Research Unit No. 6 (NAMRU-6) in Lima, Peru, using a laboratory disease model.

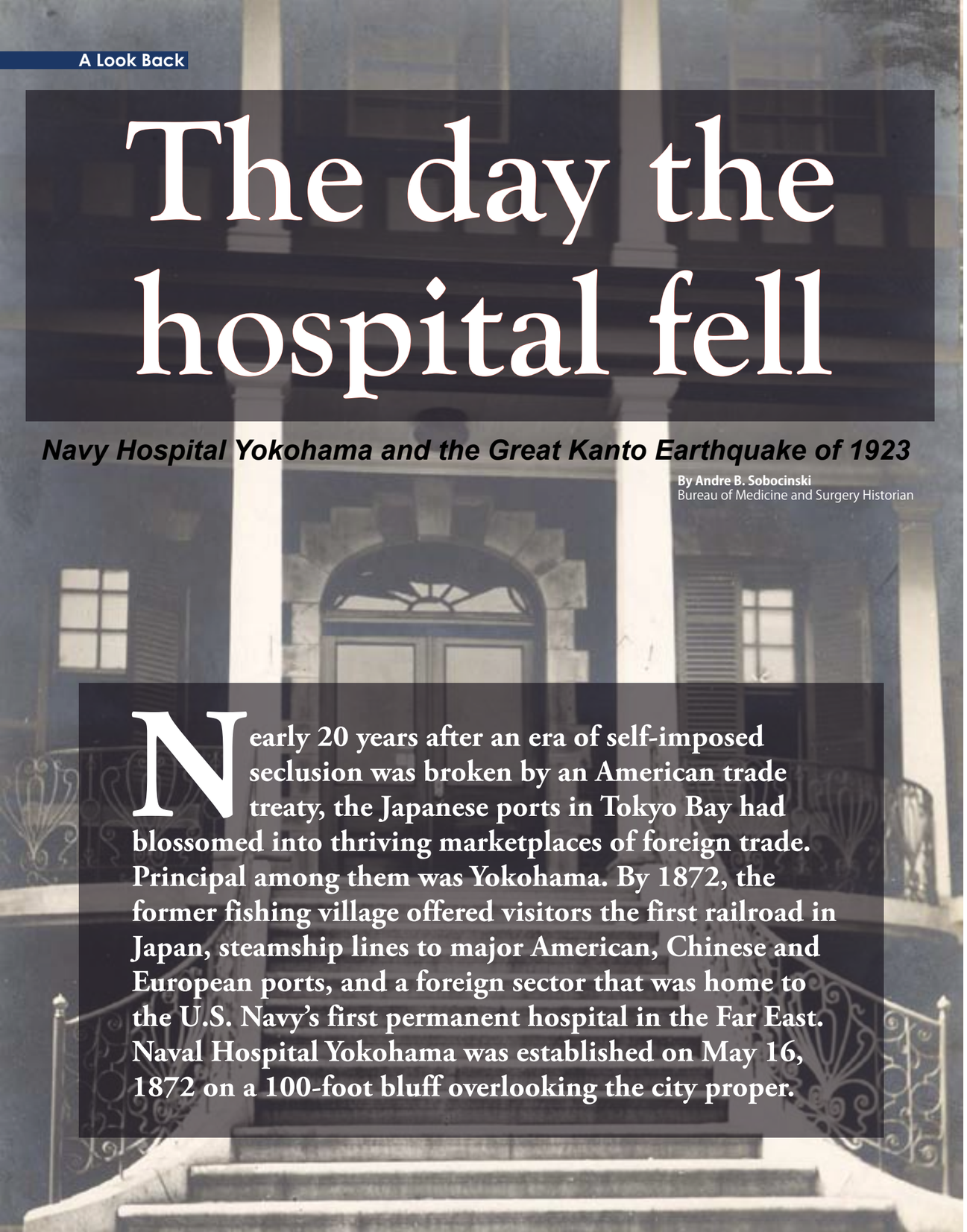
Unfortunately, since C. jejuni has the ability to produce many different types of capsule, an estimation of the valency required for an effective capsule-conjugate vaccine against C. jejuni is needed. It has been demonstrated that the C. jejuni capsule is the major heat stable determinant of Penner serotyping scheme, a system that includes 47 serotypes. Due to its complexity, Penner serotyping is performed in only a few labs worldwide, so Dr. Poly, in conjunction with Dr. Patricia Guerry of NMRC, developed a multiplex PCR method for the determination of capsule types of C. jejuni.

Designed primers were based on a database of genes from the variable capsule loci of 10 published sequences and eight strains sequenced at NMRC. The multiplex PCR can distinguish between 17 individual serotypes in two PCR reactions with sensitivities and specificities ranging from 90-100 percent. The multiplex PCR typing system is currently being used in multiple sites worldwide, including the Armed Forces Research Institute of Medical Sciences and NAMRU-6.

The day the hospital fell

Navy Hospital Yokohama and the Great Kanto Earthquake of 1923

By Andre B. Sobocinski
Bureau of Medicine and Surgery Historian



Nearly 20 years after an era of self-imposed seclusion was broken by an American trade treaty, the Japanese ports in Tokyo Bay had blossomed into thriving marketplaces of foreign trade. Principal among them was Yokohama. By 1872, the former fishing village offered visitors the first railroad in Japan, steamship lines to major American, Chinese and European ports, and a foreign sector that was home to the U.S. Navy's first permanent hospital in the Far East. Naval Hospital Yokohama was established on May 16, 1872 on a 100-foot bluff overlooking the city proper.

> "I was thrown to the ground with the balcony floor on top of me, which sheltered me from the falling debris."
>
> - Chief Nurse Edith Lindquist
> *September 1923*

Its primary mission was to provide medical support to personnel attached to the Asiatic Squadron. During its life, the hospital and its complement of personnel contended with severe cholera and influenza outbreaks, an influx of sick and injured expeditionary forces during the Boxer Rebellion, Spanish-American War casualties, and the ever-present threat of devastating earthquakes.

The toiling tides of fate wore heavily on the stately two-story red brick colonial-style hospital. By 1906, it had been eclipsed as the Navy's preeminent Asiatic hospital by the newly commissioned Naval Hospital Cañacao, in the Philippines. And although still rated as a 100-bed hospital at the turn of the century, it was widely recognized as a convalescent facility. The patient load alone echoed this fact; by 1922, rarely were more than five beds occupied at a given time and an American warship had not visited the port of Yokohama in over a year. In every aspect Naval Hospital Yokohama had long outlived its usefulness and was waiting to be removed from the books. As fate would have it, Mother Nature would weigh in to hasten the hospital's timely end.

The first day of September 1923 had started beautifully. Chief Nurse Edith Lindquist, who had been stationed at Naval Hospital Yokohama since April 1923, noted that the sunrise had dawned with deep shades of rose on this day. She thought it was the perfect background for the white-sailed fishing boats on the bay. Two hours later an abrupt rain and windstorm swept through, washing away momentary thoughts of the placid morning. A few minutes to noon, she approached a window on the second deck to look at the storm's effects.

Down the corridor on the hospital's second deck Pharmacist Lawrence Zembsch lay on his bed motionless in his quarters with his wife Gladys sitting by his side. He had recently returned to the hospital suffering "nervous exhaustion" following a special mission to retrieve and cremate the body of a Marine officer on Palau. He was the hospital's only patient.

Downstairs, Petty Officers Chester Belt and Claude Smith stood hovering by the main entrance. Their recent adventures were fresh on their minds as they discussed the week's frivolities in the bustling port city. They were among eight hospital corpsmen currently stationed at the hospital. All but one was in the hospital. Belt and Smith's excitable, yet hushed tones colored the stillness of the moment.

As consistent as the creaking quietude of the hospital hallways was Medical Director Ulyss Webb. A 22-year veteran of the Navy, Dr. Webb arrived in Yokohama in June 1922 to serve as the hospital's commanding officer as well as its pay officer and special disbursing agent, and inevitably its executive officer and chief of staff. As lunch time approached, there was little question where Dr. Webb would be—in his office contending with mounds of paperwork.

In the city proper, a wind blew off the bay gradually drying out the streets recently soaked by the passing storm. Vendors and shop owners were returning to the puddled avenues and preparing their wares of silk, bamboo, and tea for sale. The chorus of "wheeling and dealing" was punctuated by the guttural roar of a steam ship leaving Yokohama.

On the cement passenger pier, Navy nurse Nellie Treuthart and PhM3c Cedric Foster watched friends depart aboard the Canadian liner SS Empress of Australia. Neither Treuthart nor Foster would have thought this first day of September 1923 was particularly unusual.

Back at the hospital, the clocks ticked 11:58. Within seconds the earth heaved like an angry sea, accompanied by a deep rumble peppered with the sounds of things coming apart. Breaking glass and distant screams pierced the chaos. Officers' quarters, mess hall, the coal depot all crumbled into heaps. Outside, witnesses saw Dr. Webb's wife fleeing the nearby commanding officer's quarters to seek refuge in the hospital cemetery. The concrete pier Treuthart and Foster still ocupied, collapsed under them, thrusting both into the bristling bay. Over on the bluff, the entire hospital building fell like a poorly constructed movie set. It was hard to believe this had just happened. In a singlespan of four minutes, everything in Yokohama had been shaken into ruins by a 7.9 magnitude earthquake.

Chief Nurse Lindquist was among the first to free herself from the pile of fallen bricks. Remarkably she suffered only minor bruising. As she looked around every building in view was demolished. She saw two hospital corpsmen assessing the damage and heard the disembodied cries of the buried calling for assistance. Later she relived the first moments of the quake: "without any warning of any kind, the portion of the United States Naval Hospital, Yokohama, in which I was,

Naval Hospital Yokohama before the great Kanto Earthquake.

Original image from the Navy Bureau of Medicine and Surgery Library and Archives. Photo illustration by Navy Bureau of Medicine and Surgery Public Affairs.

C.E. Yost, and hospital orderly Fujiyama were each able to free themselves from the fallen structures and almost immediately began search and rescue operations. They were soon joined by nurse Lindquist, and the civilian gardener named Ito. Within moments another hard shock came and the group scrambled to the ground before continuing the search for survivors. They called out the names of their colleagues one by one. Lawrence. LAW-RENCE. No answer. Anthony. AN-THO-NEE. No response. Doctor Webb. DOC-TOR WEBB. "I'm over here." Beneath the collapsed masonry and wood a disoriented Ulyss Webb responded to their calls.

When the tremors began, Dr. Webb ran for the corridor but was only able to reach the door of his office when the hospital collapsed on top of him and carried him into the basement. He awoke, and found himself pinned by a 4 x 6 wooden beam across his pelvis and abdomen; his legs were buried in a mass of bricks and masonry. He soon heard the frayed calls of an unseen rescue party calling out his name. The gardener Ito sawed the timbered restraint from atop his left knee and the petty officers dragged Webb to safety.

seemed to raise and shake violently, a barely perceptible pause, and again the building shook with renewed violence. Though we were accustomed to frequent shocks, this one was quite different and seemed to tell me to get out. I was on the second floor and there was no way of reaching the stairs in the center of the building, as already the walls were beginning to collapse, so I quickly went out onto a small balcony. As I stepped out of the door, the railing shot off and the floor started downward with me. The rumble and roar of buildings breaking up is something not soon to be forgotten. I could see our roof coming down, also the British naval hospital across the way, and the theater on the corner falling. I was thrown to the ground with the balcony floor on top of me, which sheltered me from the falling debris."

Petty Officers Belt and Smith, along with HA1c Cary Groom, PhM1c Norman Grothe, PhM1c

The search for others proved less successful. Lawrence and Gladys Zembsch, PhM3c Paul Cannon and PhM3c Antonio Ingloglia, and civilian employees Tagaki (cook), Nakahara (servant), Shibayama (laundry man), and Uki-San (maid) could not be found and it appeared likely that they all had been crushed to death.

A massive fire had broken out in Yokohama and had quickly spread by a 60 mph gale. Webb would later relate, "The road was full of a mass of fleeing, screaming refugees. A gale was blowing, the whole city was burning, the air was full of smoke and cinders, the British Naval Hospital across the way was blazing." For three hours the remaining hospital complement worked in these conditions searching for the others, only stopping when the piles of debris that remained of Naval Hospital Yokohama were ablaze.

At the site of the fallen pier, Petty Officer Foster swam to nurse Nellie Treuthart and assisted her to a place of safety. As she related, "I could not swim and would have been drowned or crushed to death but for Pharmacist's Mate F[oster] who came to my rescue." The area of the bay had become a soup of people trying to stay afloat. Foster and Treuthart struggled their way to a stairwell used as a gangplank for ocean liners. As Treuthart crawled up the steps, she got her first look at post-earthquake Yokohama.

"Looking down over the city all was desolation. The Grand Hotel was a mass of ruins, having caught fire and burned all afternoon ... There were explosions of tanks of oil, gas, and ammunition around us all the afternoon, and at one time I counted six sampans loaded with lumber and all on fire floating around us. The birds looked white and acted bewildered, the sun was like a ball of fire, and it seemed there was no future for any of us."

On the bluff, it became clear that if there was any hope to escape the flames it was now. There was only a single avenue of escape—through the grounds of the burning British naval hospital and down the side of the bluff. Lindquist remembered "Everyone had been too busy to save any personal belongings so we were not hampered. Two of the hospital corpsmen assisted the commanding officer and the other two, the injured hospital corpsman [Yost]. On our way to the edge of the bluff the fire was very close, and the air was full of smoke and cinders which made our eyes very painful."

The flying cinders blew onto the fleeing Navy party burning holes into their clothes. "By ropes and by clinging to grass roots and shrubs, by digging in our fingers and sliding and rolling," Webb later reported "we lowered ourselves over the cliff to the reclaimed grounds of the waters edge." As they looked around they saw men and women jumping into the water to escape the raging flames. In the mass confusion ships in the harbor, including the Empress of Australia, sent their boats to shore to rescue the people in the water and ashore.

At 6 p.m., nurse Treuthart and Petty Officer Foster had been transported by a Japanese motorboat to the very ship they had said goodbye to earlier in the day. They still did not know the whereabouts of their colleagues at the naval hospital and their outlook dimmed when a fellow refugee aboard the ship claimed that the entire staff of the hospital had died in the earthquake. At 730 pm, when the survivors from the naval hospital arrived aboard the Empress, the dire rumors were finally put to rest.

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On Wednesday morning, Sept. 5, the first American Navy ship arrived in Yokohama. USS Huron was soon joined by four others that day. In all, 21 Navy ships steamed to Japan providing necessary food, clothing, medical supplies, and attention to those stricken by disaster.

In the following week, Japanese Home Minister Goto Shinpei, who was to oversee reconstruction efforts, announced that the government was going to build theaters and movie houses in the devastated region "to provide free entertainment for the people this winter, as a means of diverting their minds from the earthquake and of relieving the monotony of their lives."

In the weeks to follow, Japanese officials began tallying the number of killed and missing in the earthquake, and resulting tsunami and fires, and counted more than 140,000 people killed or presumably dead. Among the deceased were eight personnel attached to Naval Hospital Yokohama: Pharmacist Lawrence and Gladys Zembsch, PhM3c Paul Cannon and PhM3c Antonio Ingloglia, and civilian employees Tagaki, Nakahara, Shibayama, and Uki-San. The hospital they served and occupied was gone but remained on the books until its decommissioning on March 10, 1924.

Twenty-six years later, the U.S. Navy opened a new hospital in the Kanto region of Japan. Naval Hospital Yokosuka was initially established to provide medical support to personnel attached to the 7th Fleet and casualties from the Korean War. Today the facility occupies land that once housed an Imperial Japanese hospital that was first opened in 1875 and demolished by the same earthquake that destroyed Naval Hospital Yokohama on that fateful day of Sept. 1, 1923.

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DEPARTMENT OF THE NAVY
BUREAU OF MEDICINE AND SURGERY
COMMUNICATIONS DIRECTORATE
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